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LAND REFORM AND ITS EFFECTS ON THE POLITICAL AND ECONOMIC
DEVELOPMENT OF SIX SELECTED LATIN AMERICAN COUNTRIES

by



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A THESIS

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The undersigned certify that they have read, and
recommend to the faculty of Graduate Studies for accep-
tance, a thesis entitled LAND REFORM AND ITS EFFECTS ON
THE POLITICAL AND ECONOMIC DEVELOPMENT OF SIX SELECTED
LATIN AMERICAN COUNTRIES submitted by PHILLIP SHRAGGE
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ABSTRACT

This thesis concerns itself with the problem of land distribution in six selected Latin American countries, and examines the effects of land distribution patterns on the political and economic development of these countries. It is argued that land reform is necessary in these and other developing countries because the maldistribution of land reinforces certain rigidities within the system which in turn act as deterrants to development.

'Development' is defined broadly enough to encompass the multiplicity of meanings which have been ascribed to it by various social sciences and by diverse nations, societies and ideologies. In this way the term, and therefore the study, have greater universal applicability. More specific 'economic' and 'political' definitions of development are then formulated and, particularly in the latter case, this necessitates examining and relating the numerous terms used by various political scientists.

Using rank order correlation tests, it is shown that the relationship between land distribution and economic development is substantial, particularly in the distributive and growth aspects of the term. The same type of

tests also indicate that land distribution is highly associated with political integration, institutionalization and participation functions of the six political systems.

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CHAPTER I

Land reform has become a major subject of discussion in Latin America in the last decade and is usually considered to be closely associated with the concept of "development". In this process of association, land reform is treated as either a necessary and highly desirable condition of development, or is viewed as a partial consequence of the developmental process. In either case the importance of the interrelationship between these two concepts warrants further scrutiny. In order to develop various hypotheses which will help to explain the association between these two concepts, it is first necessary to define the two terms.

Land Reform - Definition

From a purely technical standpoint, almost any programme that leads to a change, presumably for the better, in the manner in which land is held or used might be described as land reform. In this context, land reform can include a broad range of changes and improvements in a wide variety of agricultural practices and institutions, from credit and taxation to irrigation and fertilizing.¹

¹See: Walter Froehlich, Land Tenure, Industrialization

Obviously this broad definition is not acceptable to everyone. Of prime concern to those who criticize this meaning of the term is the idea that land reform can take place without a change in the ownership of the land. Implicit in the broader definition is the view of land reform as a means to greater economic efficiency which, in turn, may help to promote social change.

In the narrower, more traditional sense, land reform has meant specifically a change in tenure and redistribution of land rights for the benefit of those who actually work on the land; that is, a change in property relations and the institution and structure of land ownership. This may mean the confiscation or purchase of private rural property by the government for distribution among cultivators as an outright gift, a long term purchase, or a grant in return for improvements to be made on the land. Land reform in this context will usually have three immediate objectives -- mixed in different combinations depending upon political and historical circumstances. These are: (1) turning over ownership and management of the farms to those who actually "till the soil", (2) dividing up large holdings into smaller, more evenly distributed

and Social Stability, Marquette University Press, Milwaukee, 1961, p. 8; D. A. Fitzgerald, "Land Reform and Economic Development" in, Land Tenure, K. H. Parsons, R. J. Penn, P. M. Raup (eds.), University of Wisconsin Press, Madison, 1956, p. 44.

holdings, and (3) combining small operational units into larger, or group units.²

A closer examination of these objectives would show that in many cases they seem to be in conflict with each other. Steps taken to impliment one objective may very effectively counteract steps taken to impliment another. For example, many of the farms which could best serve as examples of realizations of objective one, i.e., farms fully managed and operated by the owner and his family, may exceed the acreage ceiling and so would be broken up in effecting objective number two. However analysis will show that the contradictions only exist if the criterion by which the objectives are judged is restrictive in scope.

If the initial objectives are for the purpose of furthering economic efficiency, then breaking up a family-owned and operated unit merely because it is too large would seem contradictory. However if the purpose is to create a more equal distribution of income, the break-up of the family farm would be perfectly rational and justifiable. Therefore if the goals of land reform are one or a combination of many social, political and economic objectives, based on the attitudes and values of a particular

²Erven J. Long, "The Economic Basis of Land Reform in Underdeveloped Economies", Land Economics, Vol. 37, 1961, p. 113.

society, the above-mentioned means, or methods of implementation will not be contradictory. By choosing a definition of land reform which emphasizes the distribution of land, this paper will make the normative assumption that certain fundamental changes in property relations are needed in order to achieve basic structural changes. The criteria will thus be social, political and economic factors which will vary in accordance with the ultimate developmental goal of the particular society.

In support of this idea, Erich H. Jacoby, writing of the methodology of evaluating agrarian reform programmes, points out that "while land reform is an attempt to bring the institutional framework of agriculture into line with the requirements of social and economic progress, . . . this can only be done if the objectives of land reform correspond with the ideas and ideologies of the society concerned".³ He goes on to say that this objective contains a very strong subjective element because the interpretation of what constitutes social or economic (and, he could have added political) progress is based on the writer's interpretation of these terms.⁴

³E. H. Jacoby, "Evaluation of Agrarian Structures and Agrarian Reform Programs", Food and Agriculture Organization of the United Nations, Rome, 1966, p. 17.

⁴Ibid., p. 18.

Development - Definition

Development can be defined within the narrow framework of a particular discipline such as "economic development", "political development", or "social development", or in broader terms which encompass all the social sciences. Since this paper will consider the relationship between land reform and various aspects of development, both types of definitions will be used. In this section, those aspects of development which can be applied to all areas of the term will be discussed. The more specific definitions will be examined in the relevant sections of the paper.

The first characteristic of development which is universally accepted is that the concept is a relative one. This implies that there is no nation or society which is completely developed. As Everett Hagen so tersely puts it, "There are less developed countries and more developed countries but there are no developed countries."⁵

It follows that if the term is a relative one, there must be certain goals or ideals which are established a priori to which societies aspire. The second characteristic is that these goals and aspirations are not necessarily the same for all societies. This view, acknowledging

⁵ Everett Hagen, The Economics of Development, Richard D. Irwin Inc., Homewood, Illinois, 1968, p. 5.

the diversity of national goals and aspirations, is expressed by a compendium of experts convened by the Department of Economic and Social Affairs of the United Nations. In discussing the relation between social programmes and development policy they said,

There is general agreement that programmes must be keyed to the country's productivity and general development priorities, but differences became manifest in any attempt to translate this principle into operational guides. It would appear that socio-cultural and political contexts affect the view of how economic growth and social change are to support each other.⁶

The third characteristic of development is however that certain goals and aspirations are so broadly espoused as to be universally accepted. As Raymond Aron says,

There is no state or regime that does not proclaim its ambition to increase and improve output and to ensure a less unfair distribution of the increased production resulting from the rise of productivity.⁷

While Aron speaks in a purely economic sense, the same idea can be put in broader terms by saying that all nations aspire to greater and more equitably distributed benefits either now or in the future, for all citizens.

Finally, development is a dynamic concept whose indices progress or regress in every society. This is easily verified by examining any social, economic or

⁶"Social Policy and the Distribution of Income in the Nation", Department of Economic and Social Affairs, United Nations, New York, 1969, pp. 7-8.

⁷Raymond Aron, The Industrial Society, Simon and Schuster, New York, 1967, p. 44.

political variable over time and noting the quantitative or qualitative change which has taken place.

To summarize then, "development", in the most general sense, is taken to be a positive, relative, structural change in society so as to more equitably distribute the incremental benefits in accordance with the goals and aspirations of that particular society.

Purpose of the Study

Development in Latin America, taken in the context of positive, structural change leading to a more equitable distribution of economic, social and political benefits, has lagged behind other areas of the world since the end of World War II. Table I shows that Latin America's average annual rate of growth in manufacturing is the lowest of any world region. This indicates that there has been less relative change within the two major sectors of economic activity, namely manufacturing and agriculture.

In the agricultural sector, Tables II and III show that in both per capita food production and per capita total agricultural production, the annual rate of growth over a fifteen year period has been lower than other regions. This is a clear indication of a low degree of positive change and subsequent lag in development.

Indicators of social development, showing the incremental benefits which have accrued to the people, are

TABLE I

AVERAGE ANNUAL RATE OF GROWTH OF MANUFACTURING OUTPUT
1960-1967 (percentages)

<u>Region</u>	<u>Average Annual Rate of Growth</u>
Africa	6.0
South Asia	6.9
East Asia	7.5
Southern Europe	10.1
Latin America	5.5
Middle East	10.8
Developing countries (average)	7.3
Industrialized countries	5.6

Source: Lester B. Pearson (Chairman), Partners in
Development, Frederick Praeger, New York,
1969, p. 36.

TABLE II

REGIONAL INDEX NUMBERS OF PER CAPITA FOOD PRODUCTION

<u>Region</u>	<u>1952</u>	<u>1967</u>	<u>% Change</u>
Latin America	99	105	+6
Near East	96	110	+11.5
Far East	95	106	+11.6
Africa	97	101	+4.1

TABLE III

REGIONAL INDEX NUMBERS OF PER CAPITA TOTAL AGRICULTURAL
PRODUCTION

<u>Region</u>	<u>1952</u>	<u>1967</u>	<u>% Change</u>
Latin America	100	102	+2
Near East	98	112	+14.3
Far East	96	106	+10.4
Africa	97	104	+7.2

Source for Tables II and III: Food and Agriculture
Organization of the United Nations, Production
Yearbook - 1968, Vol. 22, Rome, 1969, p. 28.

less than inspiring. Table IV shows that at all levels of education, and in number of inhabitants per physician, Latin American growth rates have again lagged behind other developing areas.

Finally, Table V shows that the average number of inhabitants per hospital bed has increased, while positive changes have occurred in this area of social welfare in both Africa and Asia.

No attempt will be made to compare political development cross-regionally. The reasons for this will be discussed in the section dealing with political development. At this point, it will suffice to say that universally accepted definitions of the concept are lacking and that any comparisons would therefore be rather tenuous. However, based on the social and economic comparisons alone, it can be seen that the progress of Latin American development is clearly far from satisfactory.

The question must then be asked; what characteristics of Latin America are there which account for this relative lag in development?

Hypothesis - 1:

It is the main hypothesis of this paper that the distribution of the ownership of land in developing countries affects their rate of development, and that a highly unequal distribution of the ownership of land reinforces

TABLE IV

AVERAGE ANNUAL GROWTH IN EDUCATIONAL ENROLLMENT (1950-65)
AND INHABITANTS PER PHYSICIAN (1950-65)

<u>Region</u>	<u>Primary Ed.</u>	<u>Secondary Ed.</u>	<u>Higher Ed.</u>	<u>Inhabitants/ Physician</u>
Latin America	6.53	10.81	8.47	-25
Africa	8.99	17.1	15.38	-27
Asia	6.38	11.54	13.23	-42

Source: Partners in Development, op. cit., p. 363.

TABLE V

INHABITANTS PER HOSPITAL BED - ANNUAL PERCENT RATE OF
CHANGE - (1951-1960) UNDERDEVELOPED NATIONS

<u>Latin America</u>		<u>Asia</u>		<u>Africa</u>	
<u>Country</u>	<u>% Change</u>	<u>Country</u>	<u>% Change</u>	<u>Country</u>	<u>% Change</u>
El Salvador	2.8	Taiwan	3.3	Kenya	-0.2
Ecuador	2.6	Malaya	2.6	Algeria	-0.3
Chile	2.4	India	-1.8	Egypt	-1.2
Costa Rica	2.1	Ceylon	-1.9	Congo	-2.2
Uruguay	1.5	Afghan.	-2.3	Nigeria	-2.8
Honduras	1.4	Indonesia	-2.3	Uganda	-2.9
Nicaragua	1.0	Jordan	-2.9	Tanzia	-3.2
Argentina	0.0	South Viet.	-3.2	Somalia	-3.6
Dominican		Laos	-3.3	Rhodesia	-4.7
Republic	0.0	Burma	-3.9	AVERAGE	-2.2
Panama	0.0	Cambodia	-5.4		
Peru	-0.9	Iraq	-5.7		
Paraguay	-1.3	Syria	-5.8		
Brazil	-1.8	Turkey	-6.0		
Guatemala	-2.8	Iran	-6.9		
AVERAGE	+0.33	Japan	-7.0		
		Phillip.	-7.4		
		Thailand	-7.4		
		AVERAGE	-3.7		

Source: Compendium of Social Statistics, United Nations,
1967, pp. 208-209.

(a) examine the present nature of land distribution in Latin America and the historical factors responsible for these particular patterns of land ownership;

(b) attempt to determine empirically whether there is an interrelationship between land distribution and development; and if so,

(c) ascertain the direction and intensity of the relationship; and

(d) evaluate the implications of land reform on the social, political and economic development of Latin America.

Delimitation of Area of Study

Studies concerned with various aspects of Latin America usually refer to the approximately twenty countries in the Western hemisphere which have Spanish or Portuguese as their main language. However, within the context of "development", a regional study of this sort presents several conceptual problems.

If it is argued, as this paper does, that the goals and aspirations of various societies differ, and that their priorities for goal attainment may therefore be ranked differently, then selecting Latin America as the area to be studied implies that the nations within this group exhibit enough common characteristics so that their goals, aspirations and priorities for development must be highly similar. Superficially this would seem to be the case.

A common history of Spanish or Portuguese colonialism, a high rate of adherence to the Roman Catholic religion, and a common language (except for Brazil) would suggest that the region could be considered quite homogenous.

However Jacques Lambert suggests that this may not necessarily be the case. He argues that the twenty Latin American countries cannot accurately be classified as one region because of many variations in social, geographic, economic and political factors.¹⁰ Lambert goes on to divide the twenty countries into three groups, based on the degree of development of their national social structure, which he measures as a combination of the literacy rate, the per capita income, the birth rate, and the percent of population actively engaged in agriculture.¹¹ He also identifies several countries which do not seem to fit any of the above categories.

Although it can be argued that regional studies of the type done by various United Nations agencies are useful despite the variance within the region, and in fact that the variations themselves direct the investigator to the important aspects of the problem, Lambert's approach has certain merits.

¹⁰Jacques Lambert, Latin America: Social Structures and Political Institutions, University of California Press, Berkeley, 1967, p. 23.

¹¹Ibid., p. 23.

Within the twenty countries of Latin America, the following factors seem to be of great importance in establishing broad societal categories.

(a) The Racial Mix: Three countries, Uruguay, Argentina and Costa Rica, exhibit an ethnic composition which varies greatly from the other Latin American countries. As shown in the following table, their populations consist almost entirely of pure European stock. Only Brazil, with a white population of 61 percent, comes close to the above countries and may also be considered as Deviant for this reason. Because of the primarily European population, development in Argentina and Uruguay, and to a lesser degree in Brazil, followed a pattern different from that in other Latin American countries. To cite but a few examples, land settlement patterns and uses tended towards cattle ranching and other occupations which required relatively little manpower. Unlike European immigrants in other Latin American countries, who assumed higher social positions, white immigrants to Argentina, Uruguay and the southern parts of Brazil were "scattered among all social classes including manual laborers in agriculture and industry."¹²

A further distinction can be made in the case of Brazil because of its Portugese background. Wagley argues that because of distinct differences between the Spanish

¹²Ibid., p. 30.

TABLE VI

LATIN AMERICAN ETHNIC COMPOSITION - PERCENTAGES

<u>Country</u>	<u>Amerindian</u>	<u>Negro</u>	<u>White</u>	<u>Mixed</u>	<u>Other</u>
Mexico	30		10	60	
Costa Rica	0.3	1.9	97.6		0.1
El Salvador	20		5	75	
Guatemala	53.6				46.4
Honduras	6.7	2.1	1.2	89.9	
Nicaragua	5	10	17	68	
Panama	9.5	13.3	11.1	65.3	
Dominican Republic		11.5	28.1	60.4	
Argentina*	2		86	12	
Bolivia	63 (46)*		37 (10)*	(44)*	
Brazil		11	61.7	26.5	
Chile*	5		30	65	
Colombia	2	4	20	74	
Ecuador	39	5	10	41	
Peru	45.9	0.5		52.9	
Uruguay*	2		88	10	
Venezuela	2	8	20	70	

Sources: Statistical Abstract of Latin America - 1965, Latin American Center, University of California, Los Angeles, 1965, p. 30. Asterisks - Jacques Lambert, op. cit., Argentina and Uruguay, p. 29, Bolivia, p. 35. Lambert does not cite his sources. The difference in figures are likely the result of various methods of classifications. This applies particularly to Costa Rica where the percent of white population is highly questionable.

and Portugese cultures, and the strong influence of the African element in the population, Brazil has developed a culture and tradition which is in many ways different from the Spanish American countries.¹³

(b) The Urban-Rural Mix: Four countries, Argentina, Uruguay, Chile, and Venezuela, have populations which are primarily located in urban centers and who therefore pursue occupations other than agriculture. As Table VII indicates, these four nations show urban and occupational characteristics which are extremely dissimilar to other Latin American countries. The effect of a large urban population and non-agricultural occupations, it is argued, "destroys an archaic social structure based on neighbourhood, kinship, and dependence upon a chief or patron. . . ."¹⁴ The validity of this argument will be examined in other sections of this paper, but at the moment, these differences are relevant if only because they indicate structural differences.

(c) The Effect of American Influence: Two smaller countries, Puerto Rico and Panama, differ from the other Latin American countries because of the exorbitantly large economic and political influence of the United States.

¹³ Charles Wagley, An Introduction to Brazil, Columbia University Press, New York, 1963, pp. 1-24.

¹⁴ Jacques Lambert, op. cit., p. 30.

TABLE VII

PERCENT DISTRIBUTION OF POPULATION BY URBAN AND RURAL
RESIDENCE - 1963 AND PERCENT OF POPULATION ACTIVE IN
AGRICULTURE - 1965

<u>Country</u>	<u>Urban</u>	<u>Rural</u>	<u>Percent Active In Agriculture</u>
Costa Rica	34.5	65.5	48
Dominican Republic	30.3	69.7	57
El Salvador	38.5	61.5	59
Guatemala	34.0	66.0	64
Honduras	23.2	76.8	65
Mexico	50.7	49.3	52
Nicaragua	40.9	59.1	59
Panama	41.5	58.5	43
Argentina	62.5	37.5	18
Bolivia	35.0	65.0	65
Brazil	45.1	54.9	48
Chile	68.2	31.8	26
Colombia	38.0	62.0	47
Ecuador	36.0	64.0	52
Paraguay	35.4	64.6	51
Peru	47.4	52.6	47
Uruguay	82.2	17.8	17
Venezuela	67.4	32.6	29
AVERAGE	45.04	54.96	47

Source: Compendium of Social Statistics - 1967, United Nations, New York, 1968, pp. 105-107.

In the case of Panama, the influence can be attributed primarily to the United States' interest in the Panama Canal. Puerto Rico's case is the result of the Spanish-American War and subsequent aggressive American foreign policies.

(d) The "Size" Mix: Because most comparisons will be made using rank order correlations, all the small, Central American countries would have a tendency to influence the results to a much higher degree than their relative geographic and demographic size would warrant. While their omission lowers the number of countries to be studied substantially, it does not affect the total area or population figures to any great extent.

Basic to this entire argument is the thesis that the degree to which cross-national comparisons are valid is a function of the degree of commonality found within these nations. By selectively eliminating the so-called "deviant cases", it should follow that the remaining countries (Bolivia, Columbia, Ecuador, Mexico, Peru and Paraguay) have a great many common characteristics and therefore are more likely to react in a similar manner (although not necessary to the same degree) to various stimulæ. For this reason, this study will be restricted to an examination and analysis of the above six countries.

Characteristics of Latin American Agrarian Structures

The main feature of rural Latin America is the

concentration of a major portion of the agricultural land in the hands of a small number of landowners. According to United Nations figures on the subject, of the thirty-two million inhabitants constituting the economically active rural population, some one hundred thousand (about one-third of one percent) own two-thirds of the total agricultural area, about two million (6 percent) are medium sized farmers, and approximately thirty million (93 percent) are small farmers or landless agricultural workers.¹⁵ Table VIII, showing the Gini index of land concentration for all major world regions, clearly indicates that the distribution of land in Latin America is the most highly skewed of any area in the world.¹⁶

¹⁵Agriculture In Latin America: Problems and Prospects, ECLA Document E/CN.12/686, April 1963, p. 98, United Nations.

¹⁶Present day theories and measurement techniques of land and income distribution are based on the use of the Lorenz curve and the Gini ratio. The common form of the Lorenz curve shows the cumulative proportions of aggregate income (on the vertical or Y axis) plotted against the cumulative proportions of the population ranging in order from the lowest to the highest income earners (on the horizontal or X axis). Because both axes are expressed in terms of percentages from 0 to 100, the line of perfect equality is shown as a straight line rising at 45 degrees from the left hand origin. When the observations of both axes are plotted, the resulting convex curve is the Lorenz curve. The greater the degree of convexity of this plotted curve, the greater the degree of inequality of income distribution. By substituting the cumulative proportions of the total farm area for aggregate income, and the cumulative proportions of the number of farms for the population, a measurement of land distribution can be obtained.

The Gini ratio of concentration is simply the ratio

TABLE 8

GINI RATIO OF LAND DISTRIBUTION - BY WORLD REGIONS -
CIRCA 1955

<u>LATIN AMERICA</u>		<u>NORTH AMERICA & EUROPE</u>	
Country	Gini Ratio	Country	Gini Ratio
Bolivia	93.8	Italy	80.3
Chile	93.8	Spain	78.0
Paraguay	91.3	N. Zealand	77.3
Venezuela	90.9	Greece	74.7
Costa Rica	89.2	Austria	74.0
Peru	87.5	U.K.	71.0
Ecuador	86.4	U.S.	70.5
Argentina	86.3	W. Germany	67.4
Guatemala	86.0	Norway	66.9
Colombia	84.9	Netherlands	60.5
Brazil	83.7	Finland	59.9
El Salvador	82.8	Ireland	59.8
Uruguay	81.7	Belgium	58.7
Dom. Republic	79.5	France	58.3
Honduras	75.7	Sweden	57.7
Nicaragua	75.7	Canada	49.7
Puerto Rico	73.8		
Panama	73.7	Average	64.7
Mexico*	69.0		
Average	83.4		

<u>ASIA</u>		<u>NORTH AFRICA</u>	
Country	Gini Ratio	Country	Gini Ratio
Iraq	88.1	Egypt	74.0
South Vietnam	67.1	Libya	70.0
Taiwan	65.2		
Philippines	56.4	Average	72.0
India	52.2		
Japan	47.0		
Average	62.7		

SOURCE: Bruce M. Russett et al.; World Handbook of Political and Social Indicators, Yale University Press, New Haven, 1964, pp. 239-240.

*Mexico - Hung Chao Tai, "Land Reform in Developing Countries", Unpublished paper, Harvard University Center for International Affairs, 1967.

The Latifundia System

As the Gini index would suggest, the presence of large farms (latifundios) owned by individual landowners and farmed by many workers, is a common Latin American phenomenon. Latifundios vary in size, character, and relative importance in various Latin American countries. No one has defined their minimum dimensions, but they range roughly from five hundred up to one hundred thousand hectares or more.¹⁷ Latifundios may be large cattle ranches or plantations which, based on economic criteria alone, can both be efficient producers of a specific commodity. More commonly, however, the latifundio are associated with a form of agriculture known as the hacienda system.

Typically, the hacienda will have a surplus of uncultivated land which permits the owner to exploit the land without the need to add fertilizer or in any way be concerned for its condition. The surplus of uncultivated land encourages land leasing practices or sharecropping. The sharecropper will be assigned marginal land which is less fertile than the area farmed by the landowner and on

of the area between the Lorenz curve and the line of perfect equality to the total area of the triangle formed by the axes and the line of perfect equality. Because the Gini ratio is based on perfect equality, there is no normative element of judgement involved. That is, the ratio is compared not with what the distribution of land holdings (or income) ought to be, but with the objective standard of perfect equality.

¹⁷One hectare equals approximately 2.47 acres.

which water is a more scarce commodity. The peon and his family are required to fulfill certain obligations for the hacienda. A frequent pattern is for the sharecropper to work three days on hacienda land and three days on his own. At the same time, the women will be servants in the manor house for a certain number of days a week. As a result, tenant farmers or other resident workers have been a cheap and convenient way of enabling estate owners to obtain a large working force. Moreover, since the system eliminates to a great extent the need to pay cash wages, the latifundios can operate almost entirely outside the money economy.

This possession of large land areas and the institutionalization of cheap labour has created a rather unique situation in which the owner can, with little investment, obtain an income which is more than sufficient to meet his economic needs and maintain his status.

Historic Factors

The pattern of land ownership in Latin America is largely the result of certain policies established by the Spanish and Portuguese monarchs during the time of colonization. Because of the influence of the Catholic church, the rulers felt that the conversion of the native population to Catholicism was as important as the exploitation of the land. In order to comply with this religious

obligation, they entrusted the natives to those whom they gave large holdings of land. In other words, whoever received a large concession of land (repartimiento) accepted the obligation of the encomiando, meaning that they were responsible for the security as well as the spiritual welfare of the Indians. Unfortunately, the spiritual motives of the encomiendas were seldom carried out in good faith by the colonists who soon used the Indians to their own best advantage. Through this system of dual obligation on the part of the landowner, the present latifundios evolved.

The practice of giving large land grants to loyal subjects rather than the system of family farming as we know it in North America came about for four reasons. First, the feudal organization of society in Spain and Portugal at the time of colonization led the superimposition of this pattern on native cultures. As Jacques Lambert points out,

As the latifundios spread in the 16th and 17th centuries, a quasi-feudal system began to rise in Latin America at the very time when it was on the wane in Western Europe. Thus when capitalism was introduced, it clashed with a still strong and young feudal society.¹⁸

A second factor was the nature of the conquistador. He came to Latin America to gain wealth and only secondly to settle. Through land grants, it was possible to emulate the Spanish and Portugese aristocrats without

¹⁸Jacques Lambert, op. cit., p. 60.

the need to engage in manual labor. Emigration from Spain and Portugal was of a different nature than British and French emigration to North America. There was neither the religious, economic nor population pressures which influenced North American colonization, and therefore emigration on a large scale was not encouraged. It followed that a relatively small European population could best exploit the land by owning large estates and employing native labor. Finally there was the nature of the Indian himself. In many areas the Indians had established communal land tenure and were therefore unacquainted with the freehold system of the Europeans.

Because of these aforementioned factors, land settlement patterns in Latin America were much different than those of North America and, as will be seen throughout this study, affect the social, political and economic development of the region in ways not relevant to North American societies.

Social Effects of Land Distribution

Since its inception, the landowner-sharecropper (patron-peon) bond has involved more than the limited work-payment exchange characteristic of the modern employer-employee relationship. The contractual agreements made are between an owner and a labourer, but the latter assents not as an individual, but as the representative of

a nuclear family. The landowner is then expected to provide a house for the family and in some cases some cropland. In addition, the landowner is expected to provide the labourer-family with credit to carry them through the time when the crops that they are growing are harvested and sold. Furthermore, though this is not included in the contractual agreement, the landowner is expected to make available assistance in the event of illness and other emergencies that may befall the labourer and his family.

In this respect the labourer and his family, only some of whom actually work the land, may be considered the dependents of the landowner and his family. The material advantages that they receive, their income, may be viewed most realistically as flowing from this social relationship and not as a direct economic return for their labour. The total package of benefits received by the sharecropper family varies directly with the strength and intensity of the social relationship that prevails between it and its landlord.¹⁹ Furthermore, both tend to vary with duration of residence on a given property, for it is only with time that a binding social relationship can be established. In optimum situations, the relationship may be formalized by the establishment of a quasi kinship bond between the

¹⁹S. M. Greenfield and E. de Vasconcelos Barros, "Rural Labor and Economic Development in Brazil", Inter-American Economic Affairs, Vol. 19, Summer 1965, p. 77.

labourer family and that of the landowner. The system of god-parenthood makes this possible. The result is a more or less binding relationship that is characterized by a dual reciprocity of sorts. As compadre to the landowner, a labourer can ask for additional benefits including assistance in finding a position for a son. In the event of the death of his sharecropper parents, the landowner-godfather is expected to raise his godchild in his own house and in a manner not very different from that used with his own children.

For the labourer, then, the traditional system, though it may provide only a low level of living in general, does offer opportunities for advancement, within limits, and security for those who establish long term social arrangements with specific landlords. By way of contrast, wage labour offers none of these advantages and opportunities. Thus it is not surprising that when given the choice, "the average rural labourer will select to be a sharecropper rather than a wage labourer".²⁰ Portions of an interview conducted with a Brazilian farm labourer can best illustrate the traditional view of life and work.

Here we have no minimum wage, but we don't go hungry. We have everything, plenty of water, and we don't have to buy anything; we can grow what we need; in

²⁰Ibid., p. 80.

the city the best a man can do is be a worker who pays rent and buys things. To fool the boss is the same as to fool God. The poor man has to help the boss or he's the one who will suffer.²¹

The attitudes and values of the landowning class are also rigidified by the hacienda system and, as was previously stated, non-economic factors are of prime importance to this group. If a generalization will be permitted, it is that landowners derive not only income from the land, but most of their prestige as well. Many studies of rural elites have been done in Latin America and most conclude that the feeling of security which this group derives from virtual self-sufficiency prompts many to spend most of their current incomes in order to maintain the traditional way of life to which they are accustomed. As one informant put it,

We have no interest whatever in bettering our situation. What do we need? We're gentry, not commercialists or capitalists. We live well enough without many things. We just want to keep the good life as we know it.²²

The net social result of the Latin American land system is a traditional rural society in which the relationship between the landowner and the peasant follows a well defined pattern. In sociological terms, this can

²¹J. A. Kahl, The Measurement of Modernism, University of Texas Press, Austin, 1968, pp. 11-12.

²²Quoted in: "Land Tenure and Social Organization: An Ethnohistorical Study from the Bolivian Oriente", Dwight B. Heath, Inter-American Economic Affairs, Vol. 13, Winter 1959, p. 55.

be described as acceptance of ascribed status in which people are evaluated by who they are, rather than what they do, and in which the relationship of one man to another is diffuse, that is, where economic relationships are tied intimately to all sorts of other relationships involving kinship, political, religious and other social structures.

David McClelland has correctly pointed out that sociological descriptions of the above sort tend to give rise to the belief that these social characteristics cause lack of development.²³ It is certainly not the intention of this writer to make this causal assumption, especially because it is generally accepted that all societies and most individuals welcome improvement in their economic condition as long as such improvements do not involve more trouble than they are worth, that is, do not necessitate too many changes in established behavior patterns and controvert too many accepted values. However, it is logical to assume that these sociological characteristics, precipitated by the hacienda system, are symptoms of a more basic problem.

Everett Hagen points out that a hierarchical, diffuse social structure such as is found in Latin American rural societies, but typical also of most traditional

²³D. C. McClelland, The Achieving Society, D. Van Nostrand Co., Princeton, N.J., 1961, p. 15.

societies, creates authoritarian father-child relationships.²⁴ The factors underlying this phenomenon are many and varied, but center around the concept that parents see themselves living in an environment over which they have little or no control and are frustrated because of this. The frustration leads them to adopt authoritarian attitudes towards their children and also to discourage initiative in the young. This creates frustrations in the children and the phenomenon thus becomes self-perpetuating.

From this point, the discussion leads us to the concept of need achievement which Hagen defines as,

. . . not a need to attain a certain station in life but rather satisfaction in the process of achieving. It refers to a quality which makes an individual find satisfaction . . . in the process of solving problems, in manipulating effectively by the exercise of his judgement and abilities a situation containing elements he has not previously dealt with, in attempting something difficult, in facing a test of his capabilities.²⁵

Studies have shown that children with highly authoritarian fathers have a great propensity towards low need achievement. Of particular significance is the study done by Rosen and D'Andrade, using interviews of parents in Japan,

²⁴E. E. Hagen, On the Theory of Social Change, The Dorsey Press Inc., Homewood, Illinois, 1962, p. 143.

²⁵Ibid., p. 105.

Germany and Brazil.²⁶ Their findings show that dominant behavior specifically on the part of the father, inhibits development of need achievement. McClelland interprets this as arising from the fact that "the boy is more likely to get his conception of the male role from his relationship to his father. . . ." ²⁷

Without delving into this extremely complex subject any deeper, the point has hopefully been made that a highly rigid, traditional social structure such as that of the hacienda, is not only self-perpetuating, but also greatly inhibits the initiative of all social classes within this framework.

With this historical and descriptive background in mind, this paper will now proceed with an analysis of the effects of this land tenure system on the various aspects of development. The first to be considered will be economic development.

²⁶B. C. Rosen and R. G. D'Andrade, "The Psychological Origins of Achievement Motivation", Sociometry, 1959, Vol. 22, pp. 185-218.

²⁷McClelland, op. cit., p. 353.

CHAPTER II

Economic Development - A Specific Definition

Translating the "general" definition of development into a more specific "economic" definition of the term is, for the most part, relatively simple. "Positive relative change", in economic terms, can be taken to mean "growth". "Structural change" refers to relative changes in the size of various sectors within the economy, while "equitability" can be considered as changes towards a more equitable distribution of land and income.

Most economists are aware of the distinction between "economic growth" and "economic development". Charles W. Anderson, for example, differentiates between the two concepts by saying that,

economic growth can be achieved by doing more of what you have always done, or doing it better. One can grow economically by producing more coffee or tin, or copper, or even by diversifying exports to include other products. . . .

The term "economic development" implies something more than "economic growth" however defined. It implies a structural revision of the existing patterns of economic life. It means that one must "build in" the intricate functions of productivity and exchange characteristic of nations that have achieved high levels of self-sustained productivity and growth.²⁸

²⁸Charles W. Anderson, Politics and Economic Change in Latin America, D. Van Nostrand Co., Princeton, 1967, pp. 47-48.

Charles P. Kindleberger sees a similar distinction between the two terms. He says,

. . . economic growth means more output, and economic development implies both more output and changes in the technical and institutional arrangements by which it is produced.²⁹

Kindleberger goes on to emphasize the interrelationship between the two concepts and points out that it is extremely unlikely that there can be development without growth because, "changes in function requires a change in size."³⁰

However it should be noted that while both these definitions recognize "structural change" as an integral part of economic development and at least imply that "growth" is a necessary condition of development, as typical examples of "economic" definitions of the term, they both ignore the distributive aspects of development which are taken to be the third significant aspect of our general definition of the term.

Jacob Viner argues forcefully that economists rightfully reject the need to include notions of equitable distribution in the concept of "development". He says,

I have not found a single instance where statistical data in terms of aggregates and of averages have not been treated as providing adequate tests of the degree

²⁹Charles P. Kindleberger, Economic Development, McGraw Hill Book Co., New York, 1965, p. 3.

³⁰Ibid., p. 3.

of achievement of economic development. I know, moreover, of no country which regards itself as underdeveloped which provides itself with the statistical data necessary for the discovery of whether or not growth in aggregate national wealth and in per capita income are associated with decrease in the absolute or even relative extent to which crushing poverty prevails.³¹

It is perhaps presumptuous to disagree with such an influential economist, yet certain deficiencies must at least be pointed out. Ideas of how income should be distributed are generally considered to be part of a broadening view of equality and development which is a relatively recent phenomenon. By ignoring this value change, or perhaps considering it outside the realm of economics, the above-mentioned economist (and all others who adopt this point of view) would seem to accept the classical economic philosophy which maintained that in a free competitive market, not only would the rate of economic growth be maximized, but the resulting distribution of income would coincide with the distribution of ability.

In support of this view, an Italian economist, Vilfredo Pareto, after making a number of statistical studies of income distribution in different countries and at different times, and finding a striking similarity in

³¹Jacob Viner, "The Economics of Development", in The Economics of Underdevelopment, A. N. Agarwalla and S. P. Singh (eds.), Oxford University Press, London, 1968, pp. 14-15.

the degree of income inequality, "concluded that this feature of economic life must be embedded in something natural rather than institutional, and advanced the suggestion that income distributions merely reflect the gross inequality in the distribution of human abilities."³²

This view of the nature of man ignores several important factors. It is clear that even in a "free market" where conditions of political and legal equality exist, the distribution of earnings does not necessarily coincide with the ability of the worker. The productivity of a worker depends not only on his own effort, but also on the amount of other factors of production he uses and their relative costs. It can also be argued that since the ability of a worker is at least partly dependent on his education, training, health and other such social determinants, it depends also on opportunities open to him to take advantage of these social services. To do so requires not only conditions of political and legal equality, but also a certain measure of economic equality.³³

It is for these reasons that economic development, in the context of this paper, will include the movement

³²H. Scott Gordon, "Ideas of Economic Justice", Daedalus, Summer 1963, p. 443.

³³An excellent discussion of the "equality" concept in Western civilization and a strong criticism of Viner's point of view can be found in Gunnar Myrdal's Rich Land and Poor, Harper and Bros., New York, 1957, pp. 109-149.

towards positive distributive equality as well as growth and structural change.

The following table lists the indicators of economic development chosen to represent the various components of development and shows the correlation of each indicator with land distribution. Each indicator and the resulting coefficient will be discussed separately.

Equitable Distribution

Land distribution and agricultural development.

Since land tenure arrangements are most immediately and directly associated with the creation and accessibility of income earning opportunities and their subsequent distribution, the relationship between land distribution and income distribution must be further explicated.

Professor Peter Dorner points out that,

Land tenure institutions comprise the legal and contractual or customary arrangement whereby people in farming gain access to productive opportunities on the land. These tenure arrangements determine the ability of individuals to gain access to these opportunities, and define in part the nature and dimensions as well as the future security of such opportunities. In short, land tenure institutions determine the pattern of income distribution in the farm sector.³⁴

In support of Dorner's assertion, Charles T. Stewart Jr., writing of land and income distribution in

³⁴Peter Dorner, The Influence of Land Tenure Institutions on the Economic Development of Agriculture in Less Developed Countries, Land Tenure Center, University of Wisconsin, Madison, October 1968.

TABLE IX

SPEARMAN RANK - CORRELATION COEFFICIENTS FOR CORRELATIONS
OF LAND OWNERSHIP DISTRIBUTION WITH 21 INDICATORS OF
ECONOMIC DEVELOPMENT - CIRCA 1950-1965

<u>Indicators of Economic Development</u>	<u>Land Dist.</u>
Equitable Distribution -	
(1) Gini Index of Agricultural Income	.95
Structural Change -	
(2) % Change - Per Capita Industrial Production	.66
(3) Capital Formation as % Gross Domestic Product	.42
(4) % Urban Population - 1960	.94
(5) % Change Urban Population - 1950-1960	-.26
(6) Persons Employed in Industry as % Urban Population - 1960	.86
Growth -	
(7) Average Yearly % Change - Agric. Production - 1946-1959	.85
(8) Hectares of Arable Land Per Tractor	.77
(9) Av. Yearly Consumpt. Nitrogen Fert. - 1952-1967	.66
(10) Av. Yearly Consumpt. Phosphate Fer. - 1952-1967	.60
(11) Av. Yearly Consumpt. Potash Fer. - 1952-1967	.60
(12) % Change Potato Yield Per Hectare - 1950-1965	.14
(13) % Change Dry Bean Yield Per Hectare - 1950-1965	.66
(14) % Change Maize Yield Per Hectare - 1965	.49
(15) % Change Wheat Yield Per Hectare - 1950-1965	.37
(16) % Change Sugar Cane Yield Per Hectare - 1950-1965	-.20
(17) % Change Rice Yield Per Hectare - 1950-1965	-.14
(18) % Change Tobacco Yield Per Hectare - 1950-1965	-.14
(19) Agric. G.D.P. Per Person Active in Agric. - 1950-1960	.90
(20) Consumer Price Index - 1960	.72
(21) Food Price Index - 1960	.72

The data and calculations for each indicator and coefficient are shown in the appendix, pp.

peasant countries, argues that agricultural land ownership can be used as an indirect measure of income distribution in countries lacking income data.³⁵ As pre-conditions of this hypothesis, he suggests that land distribution is a fair approximation of income distribution in agriculture if (1) agriculture is predominantly subsistence, (2) there is no large class of agricultural wage labourers, and (3) peasants have no major supplementary source of income.³⁶

If these conditions are satisfied and if the bulk of the population (he suggests 80 percent) is engaged in agriculture, most of the non-agricultural population probably falls within the upper tail of the personal income distribution. It follows that along the rest of the income curve the distribution of peasant household incomes is equivalent to the distribution of all incomes and distribution of landholding by size is a reasonable approximation to the distribution of peasant household incomes.

The difficulty in testing this hypothesis lies in the lack of relevant data and the rigidity of some of his pre-conditions. As an example, of data available for 98 countries, only 12 have 80 percent or more of their labour force employed in agriculture. Of these twelve nations,

³⁵Charles T. Stewart Jr., "Land and Income Distribution in Peasant Countries", Land Economics, Vol. 37, 1961, pp. 337-346.

³⁶Ibid., p. 339.

none have available distribution data for either land or income.³⁷ By reducing the qualifications to countries which can broadly be described as primarily agricultural, peasant economies, Gini indices for land and income distribution were limited to a sample of five (Guatemala, Colombia, Puerto Rico, El Salvador and India).³⁸

However, as the following table and Spearman test of rank order association shows, a correlation of .90 was obtained.

Using Russett's Gini indices of land distribution, and Gini indices of agricultural income calculated from Economic Commission for Latin America data, a Spearman test shows a correlation of .95.

While the general implications of both these tests of the hypothesis can be questioned because of the size of the samples, the high degree of correlation and the similarity of results can be taken as strong support of Stewart's and Dorner's theses.

The close relationship between the skewed distribution of land ownership and a highly unequal income distribution

³⁷ Bruce M. Russett et al, World Handbook of Political and Social Indicators, Yale University Press, New Haven, 1964, pp. 239, 245.

³⁸ Ibid., pp. 239, 245.

TABLE X

GINI INDICES OF LAND AND INCOME DISTRIBUTION - SELECTED COUNTRIES

<u>Country</u>	<u>Gini-Land</u>	<u>Gini-Income</u>	<u>Land-Rank</u>	<u>Income-Rank</u>	<u>D</u>	<u>D²</u>
Guatemala	.860	.458	5	5	0	0
Colombia	.849	.432	4	4	0	0
Puerto Rico	.738	.417	2	3	1	1
El Salvador	.828	.400	3	2	1	1
India	.522	.365	1	1	0	0

$$R_s = .90$$

Source: Bruce M. Russett et al, pp. 239, 245, op. cit.

TABLE XI

GINI INDICES OF LAND AND INCOME DISTRIBUTION - SELECTED COUNTRIES

<u>Country</u>	<u>Gini-Land</u>	<u>Gini-Income</u>	<u>Land-Rank</u>	<u>Income-Rank</u>	<u>D</u>	<u>D²</u>
Brazil	.837	.433	3	4	1	1
Colombia	.849	.432	4	3	1	1
Ecuador	.864	.449	6	6	0	0
El Salvador	.828	.431	2	1.5	.5	.25
Venezuela	.909	.473	7	7	0	0
Argentina	.863	.448	5	5	0	0
Uruguay	.817	.431	1	1.5	.5	.25

$$R_s = .95$$

Source: Gini land index - Russett, Ibid., p. 239.
 Gini income index - derived from ECLA document E/CN.12/829, pp. 17-18.

hold important consequences for economic development. Based on the criterion of distributive justice alone, the relationship connotes lack of economic development. As Thomas F. Carroll points out, ". . . these equity considerations may be even more important than those related more strictly to efficiency."³⁹ Carroll goes on to say that unequal income distribution creates pressures in the socio-political spheres, but even if this aspect is not considered at this time, tenure-engendered inequalities seem to show strong linkages with economic performance.

Structural Change

Land distribution and industrial development. In societies having a majority of their population in agriculture (as in the case of the six countries being studied), the per capita income level of the rural population is a key factor in determining the demand for goods and services in the economy. Simply stated, poor people are poor customers for industrially produced goods. While statistics showing the consumption patterns of the rural populations in the sample countries are lacking, a great number of statements can be found supporting the concept that industrial development in many Latin American countries is held

³⁹Thomas F. Carroll, "Land Reform as an Explosive Force in Latin America", in Explosive Forces in Latin America, J. J. Te Paske (ed.), Ohio State University Press, 1965, p. 94.

back by the small size of the domestic markets.⁴⁰

In Latin America, where industrial exports are not significant, and where import substitution has been the main rationale for industrialization, the assumption can be made that per capita industrial production is a function of the amount of domestic industrial consumption. In this case, the effect of land distribution on per capita industrial consumption can be tested.

A Spearman R test of rank association for the sample countries shows a correlation of .66 which is not highly significant. It should be noted, however, that this result is obtained because of the deviance of one country -- Peru. If a similar test is done for the remaining five nations, a correlation of 1.00 is achieved. The Economic Survey of Latin America, 1967 points out that during this period Peru experienced a boom in the production of fish meal and an expansion of the motor vehicle assembly industry.⁴¹ It can be assumed that the above-mentioned increases affected Peru's rate of change of industrial production

⁴⁰See: United Nations document E/CN.12/686, p. 83; Peter Dorner, op. cit., p. 7; Robert Alexander, "Agrarian Reform in Latin America", The Journal of Economic History, Vol. 23, December 1963, p. 561; Bruce F. Johnston and John W. Mellor, "The Role of Agriculture in Economic Development", American Economic Review, Vol. 51, September 1961, p. 580.

⁴¹Economic Survey of Latin America, 1967, Economic Commission for Latin America, United Nations, New York, 1969, p. 185.

substantially during this period and since the processing of fish meal is almost totally unique to Peru in Latin America, the other five nations would not have been similarly affected. It would therefore seem that there is indeed a relatively high positive association between land distribution and industrial production (and indirectly, industrial domestic consumption).

Land Distribution and Capital Formation

Probably the greatest contribution of land reform to economic development and structural change is found in its possible impact on capital formation and investment. Johnston and Mellor argue that,

in underdeveloped countries, where agriculture accounts for some 40 to 60 percent of the total national income, the transition from a level of saving and investment that spell stagnation to one permitting a tolerable rate of economic growth cannot be achieved unless agriculture makes a significant net contribution to capital formation.⁴²

The question of whether increased capital formation can be encouraged by a wider and more equitable distribution of income in rural areas has not been resolved.

Some economists feel that,

when most of the profits of agriculture go to a few great families, it might be easier to induce these families to invest their returns in agriculture than

⁴² Johnston and Mellor, op. cit., p. 579.

to try to persuade thousands of peasants to put their small margins of surplus to productive use.⁴³

Others see land reform as a means of increasing rural capital formation by offering greater incentives and rising income expectations to the peasants.⁴⁴ They also point to the conspicuous consumption patterns of the large landowners as a reason why this group does not save and invest a significant portion of its income. For instance, Nicholas Kaldor estimated that if the large property owners of Chile would reduce their consumption expenditures to the corresponding level of that found among large property owners in Great Britain (i.e., to 30 percent of gross income from property), "the personal consumption expenditures of this group would fall from 21.1 to 10.3 percent of the national income. The freed resources would be more than sufficient to double the country's investment in fixed capital and inventories. This means that, according to official estimates, net investment would increase from 2 to 14 percent of net national income."⁴⁵

⁴³Ralph Barlowe, "Land Reform and Economic Development", Journal of Farm Economics, Vol. 35, 1953, p. 185.

⁴⁴See: Philip M. Raup, "Land Reform and Agricultural Development", in Agricultural Development and Economic Growth, H. M. Southworth and B. F. Johnston (eds.), Cornell University Press, Ithaca, 1967, p. 277; Rainer Schickele, Agrarian Revolution and Economic Progress, Frederick A. Praeger, New York, 1968, p. 80.

⁴⁵Quoted in Rainer Schickele, op. cit., p. 80.

Ralph Barlowe makes the point that while large landlords generally use their savings to purchase more land, when the opportunity to buy land is closed to them, they often become the potential leaders of new industries.⁴⁶ Edmundo Flores provides a good example of this shift of landlord interest from rural to urban investment in Mexico. He observes,

When the land reform was initiated (in Mexico) there was a flight of capital in search of security from agriculture to the cities. At first, most of this capital was invested in speculative ventures in urban real estate but soon it was attracted to the construction industry and from there it gradually spread to other industrial branches. Thus a few years after land reform had diverted capital away from agriculture, the assistance of this capital was secured and utilized through the establishment of industries new to the country.⁴⁷

It is not possible at the present time to either trace the flow of investment funds from the agricultural sector to other sectors, or to establish any strong relationship between the distribution of land ownership and capital formation. A Spearman test of this relationship in five of the six sample countries showed a small, positive association (.42) which cannot be taken as at all significant.

⁴⁶Raleigh Barlowe, op. cit., pp. 185-186.

⁴⁷Edmundo Flores, "Agrarian Reform and Economic Development", cited in Barlowe, op. cit., p. 186.

Land Distribution and Urbanization

The movement of agrarian populations to urban centers is an important indicator of structural change within the economic system. However, this change, in order to be called economic development, must be accompanied by subsequent positive changes in the income levels and occupational structures of the migrants. The great influx of people from rural areas tend to settle in the slums surrounding most cities. As many authors have pointed out, these people tend to find work as labourers or in the service sector primarily because of their low educational standards.⁴⁸ The subsequent low incomes and small occupational changes which these people receive cannot, in many cases, be construed as "development", although it must be pointed out that for sharecroppers who have never before received a wage, any small income which allows them to enter the money economy can be considered as a small degree of "development".

Table (see Appendix), showing the relationship between the percent of urban population and land distribution, indicates that these two variables are highly associated (.94). The direction of this relationship cannot in

⁴⁸ See: Charles M. Haar, "Latin America's Troubled Cities", Foreign Affairs, Vol. 41, No. 3, April 1963; Tad Szulc, Winds of Revolution, Frederick A. Praeger, New York, 1963, pp. 49-54; W. Stanley Rycroft and M. M. Clemmer, A Study of Urbanization in Latin America, Commission on Ecumenical Mission and Relations, New York, 1963, pp. 46-48.

any way be construed from this test. It can only be observed that in the sample countries, the two variables are highly correlated. A further test of the association between land distribution and the per cent change in urbanization within the same countries yields very different results (-.26). This would indicate that a more equitable distribution of land does not "hold" the rural population to the land, as some economists suggest.⁴⁹

Finally, the Spearman test shows that the people employed in industry as a percent of the urban population is highly associated with land distribution. While the variance in percent employed in industry is not great within the sample countries, it is felt the results are important because they indicate both a greater willingness on the part of the rural migrants to engage in industrial occupations, and increased opportunities for this type of occupation in countries with relatively more equitable land distribution.

It can be concluded that land distribution and economic structural change seem to have a positive relationship with each other. No causal relationship can be implied, however the tests would suggest that further investigations into these relationships is certainly warranted.

⁴⁹Peter Dorner, op. cit., p. 24; W. F. Owen, "The Double Developmental Squeeze on Agriculture", American Economic Review, March 1966.

Economic Growth

Land distribution and growth in the agricultural sector. The expansion of agricultural output, or growth, can take place as a result of increases in the yield of various crops per unit of land, or an increase in the effective amount of arable land. The latter alternative, land utilization, is directly related to land distribution.

Land Utilization

As the 1966 Economic Survey of Latin America points out,

Generally speaking, farm size is in reverse ratio to the proportion of land on which crops are grown by intensive methods.⁵⁰

The following table (Table XII) shows clearly that this is indeed the case for the sample of seven countries from which the table is drawn. Unfortunately, similar data are not available for all the six countries being studied, although three countries, Colombia, Ecuador and Peru, are included in the table.

A further picture of the decreasing intensity of land use can be obtained from Table XIII. Although in the aggregate the latifundios occupy 23 times as much land as the minifundios, the amount of cultivated land on the large estates was only approximately 6.5 times as great as the small farms.

⁵⁰ Economic Survey of Latin America, 1966, United Nations, New York, 1968, p. 346.

TABLE XII

LATIN AMERICA - USE OF CULTIVATED LAND BY TYPE OF FARM - IN SEVEN COUNTRIES - PERCENTAGES

<u>Type of Farm</u>	<u>Annual Crops</u>	<u>Perm. Crops</u>	<u>Pasture</u>	<u>Fallow Land</u>	<u>Total</u>
Minifundios	61	13	12	14	100
Family farms	42	7	28	23	100
Medium-sized multi-family units	26	7	25	42	100
Latifundios	17	6	29	48	100
TOTAL	29	7	26	38	100

Source: Economic Survey of Latin America, 1966, United Nations, New York, 1968, p. 347.

Countries: Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Peru.

TABLE XIII

LATIN AMERICA - LAND USE, EXPRESSED AS A MULTIPLE OF THE AMOUNT OF LAND OCCUPIED BY MINIFUNDIOS - IN SEVEN COUNTRIES

<u>Type of Farm</u>	<u>Land Under Cultivation</u>	<u>Natural Pastures</u>	<u>Forest and Scrub</u>	<u>Other Uses</u>	<u>Total Farm Land</u>
Minifundios	1.0	1.0	1.0	1.0	1.0
Family farms	4.6	15.5	15.2	6.7	8.9
Medium-sized multi-family farms	6.2	14.3	21.3	12.7	10.3
Latifundios	6.4	38.8	62.6	33.6	22.6

Source: Ibid., p. 347.

The economic survey of Latin America points out that as a rule the existence of idle land is evidence of low levels of technology and farm management, or of a shifting agriculture, characterized by little or no crop rotation but a great deal of rotation of land. They go on to say that,

The much higher proportion of idle land on the latifundios is not, as might be supposed, indicative of more efficient land use; it merely reflects the widespread practice of rotation of land made possible by the immense size of these estates.⁵¹

Land Distribution and Agricultural Productivity

Much of the discussion regarding agricultural productivity in Latin America revolves around the "farm size" issue. However, as Solon Barraclough so aptly puts it,

To discuss the advantages of big and little farms in the abstract is like talking in general about one's preferences for blondes or brunettes. It all depends -- upon the girl, the time, and the place.⁵²

In more everyday terms, Earl Heady states that "[t]here may be no 'best' size of farm per se. The best size will depend on other values and goals specified within the country."⁵³ Accepting the difficulties of evaluating productivity according to farm size, an attempt will be made to evaluate

⁵¹Ibid., p. 348.

⁵²Solon L. Barraclough, commenting on an article by K. Bachman and R. P. Christensen in Agricultural Development and Economic Growth, op. cit., p. 263.

⁵³Earl Heady, Ibid., p. 261.

agricultural productivity in the sample countries according to other criteria. It must be pointed out that since labour is a more abundant, and therefore cheaper factor of production than land, in these particular countries efficiency in production is usually measured in terms of return per unit of land rather than in production per man.

Data showing the average yearly percentage change in agricultural production of the six countries are shown in the appendix. Using a Spearman test of rank correlation, a fairly high association of .85 was obtained. This would suggest that within the sample countries, increases in agricultural production are highly associated with the degree of land distribution. Because the statistics are aggregate data, this annual increase in production could be the result of more land being utilized rather than productivity increases in the same amount of land. For this reason, the significance of the test must remain inconclusive.

Since productivity is to some extent a function of the amount of capital and/or technology, some corroboration could be given to the above test by showing that the amount of capital and/or technology was also highly associated with the Gini index of land distribution. Using the number of hectares of land per tractor, the number of hectares of arable land per unit of fertilizer as indicators of capital and technology respectively, results ranging from .77 to .60 were obtained (see Table in Appendix).

The tests show that there is a degree of positive correlation between certain capital and technological inputs and the degree of land distribution. While these results can be taken as some support of the thesis that productivity in the agricultural sector is positively associated with the degree of land distribution, it must be emphasized again that these tests give no indication of the distribution of productivity by farm size, but speak in macro terms only.

Other indications of agricultural productivity and its association with land distribution can be obtained by examining the relative changes in the production of various agricultural crops and commodities within the sample countries over a period of time. Agricultural production can be classified as either for domestic use or export.

The results, while not statistically significant, certainly indicate a definite trend. It can be seen that domestic crop production is in all cases positively associated with land distribution while export crops are either negatively associated with land distribution or show little correlation. This would suggest that a more equitable distribution of land is conducive to greater productivity in those crops which are grown primarily for personal or domestic use.

Conversely, it would appear that export commodities in the six countries are more efficiently produced on

larger farms. Unfortunately the tests do not distinguish between plantations and latifundios and therefore cannot be used to evaluate the relative efficiency of the two types of large agricultural units.

A final test of agricultural productivity contravenes an earlier statement in which it was suggested that productivity in these countries should be based on yield per unit of land rather than per person. The test, showing the agricultural gross domestic product per person active in these countries should be based on yield per unit of land rather than per person. The test, showing the agricultural gross domestic product per person active in agriculture and its association with the Gini index of land distribution, shows a high positive correlation of .90. The test is included merely to indicate that more equitable land distribution does influence productivity in the six countries being studied, whether through increased initiative, incentive, or for other reasons.

Price Stability and Land Distribution

Growth of demand for food is of major economic significance in most Latin American countries for several reasons. Firstly, high rates of population growth, as found in this region, alone create higher demand. Secondly, the income elasticity of demand for food in these countries is considerably higher than in more developed countries.

Johnston and Mellor suggest something in the order of .6 in Latin America vs. .2 or .3 in Western Europe, the United States and Canada.⁵⁴ Therefore a given rate of increase in per capita income has a considerably stronger impact on the demand for agricultural products in Latin America than in economically advanced countries.

Coupled with these factors is the movement of population from rural to urban areas which increases average per capita income and therefore consumption. Urbanization also presents the problem of transportation for increasing amounts of food supplies and subsequent higher costs.

If food supplies fail to expand at the same rate as the growth of demand, the result is likely to be a substantial rise in food prices leading to pressure on wage rates with consequent adverse effects on industrial profits, investment and economic growth. It is therefore important to examine the relationship between the distribution of land and the price of food and other commodities.

As has been shown, a more equitable distribution of land is associated positively with higher productivity in domestic food production. It is now necessary to ask whether this higher productivity of food production manifests itself in more stable food prices and subsequently

⁵⁴Johnston and Mellor, op. cit., p. 572.

prices of other goods and services.

Spearman tests show that both consumer price indices and food price indices for the year 1960 have a correlation of .72 with the Gini index of land distribution. This relationship can be construed as indicative of the higher productivity mentioned above as well as a greater inclination on the part of the smaller farm units to produce domestic food rather than export crops.

Conclusion

In general, the relationship between land distribution and economic development is more significant than was originally anticipated. Particularly in the distributive and growth aspects of development, the association with land distribution seems to be extremely significant. The relationship of land distribution and structural development is not as clear, but this may be because of the more indirect relationship between this aspect of development and land distribution.

A more rigorous analysis of the relationship between land distribution and economic development depends to a great extent on the availability of more relevant and accurate data. It would be particularly useful to have data broken down into urban and rural categories so that structural differences and structural changes between the two sectors can be examined.

CHAPTER III

Political Development - Definitional Problems

In an earlier portion of this paper it was stated that no attempt would be made (at that time) to compare political development cross-regionally. It is now necessary to show why this comparison was not attempted.

The difficulty stems from the more basic problem of finding a universally acceptable definition of the concept. In this regard several limitations become evident. Firstly, many of the terms, or verbal expressions that stand for the concept of political development, have highly dissimilar meanings in various societies. For example, "participation", in the Western view, refers to a process by which conflicting interest groups can enunciate their political demands through political parties or other organizations which perform similar functions, and through this process, participate in the formulation of national politics.⁵⁵

⁵⁵For various interpretations of this view see: S. N. Eisenstadt, "Initial Institutional Patterns of Political Modernization", in Political Modernization, Claude E. Welch (ed.), Wadsworth Publishing Co., Belmont, California, 1967, p. 252; Lucian W. Pye, Aspects of Political Development, Little, Brown & Co., Boston, 1966, p. 39; Almond and Verba, The Civic Culture, Princeton University Press, Princeton, 1963, pp. 17-21; Samuel P. Huntington, Political Order in Changing Societies, Yale University Press, New Haven, 1968, pp. 34-35.

In other words, participation is a means by which the polity communicates its demands to a political hierarchy which the majority of the people have chosen.

On the other hand, the Soviet version of "participation" denies the need for expressing contrary opinions since, in a classless society, the goals of the entire polity will be the same. Participation, therefore, refers to a mass response to major political goals and policies as set forth by the political elite.⁵⁶

A second limitation to the establishment of a general definition of "political development" is the great proliferation of expressions which are used to define the concept. In the formulation of a nomenclature for this sub-discipline, academics have tended to create their own terms rather than accept previously formulated components even though these may have a high degree of congruence of meaning. The result is that political development is defined in a multiplicity of terms whose meanings overlap to a great extent. Lucian Pye, in an attempt to "illuminate a situation of semantic confusion",⁵⁷ delineates ten categories in which political development definitions can be placed.

⁵⁶Herber Ritvo, The New Soviet Society, The New Leader Prss, New York, 1962, pp. 170-172, cites Soviet policy statements on the subject which express this view.

⁵⁷Lucian Pye, op. cit., p. 33.

While this is useful for purposes of identifying and categorizing various authors' concepts, it does not help in the creation of a general definition.

Since this paper has argued that "development" can be defined as growth, positive structural change, and distributive equality, it should follow that political development can be thought of in these terms. The following structural-functional model is an attempt to integrate the various concepts used by the more significant scholars of political development, into a general definition of the term. The model, and the explanation which follows, serves the purpose of showing the direction and relationship of the various terms.

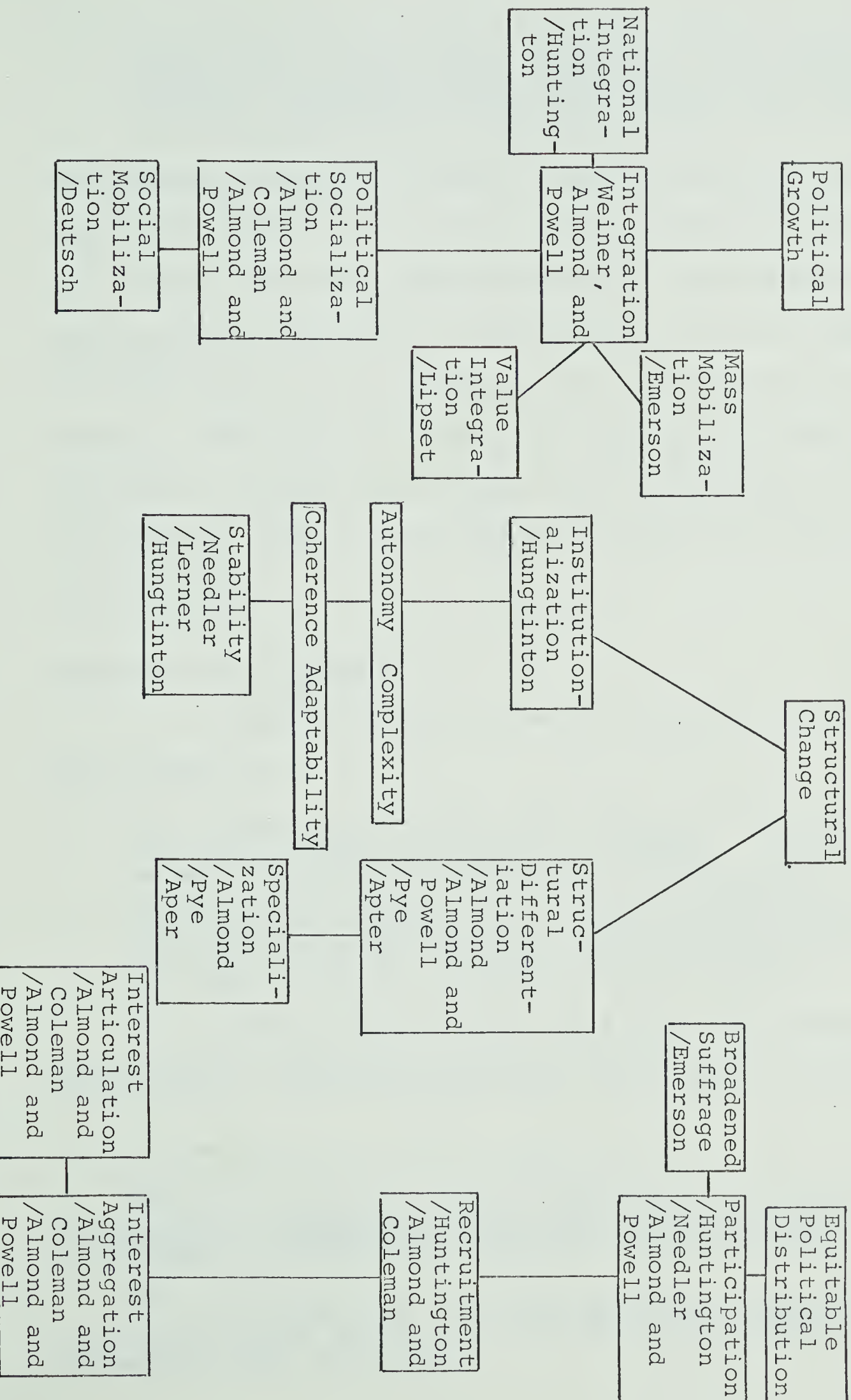
Political Growth

The model shows political growth as having three main components; social mobilization, political socialization, and integration. As can be seen, the three concepts are interrelated, but no causal relationship is implied. In order to further examine this relationship, it is first necessary to define the terms.

Social Mobilization

Karl W. Deutsch, the man responsible for introducing this term into political science vocabulary, defines social mobilization as,

DIAGRAM 1



the process by which major clusters of old social, economic and psychological commitments are eroded or broken and people become available for new patterns of socialization and behavior.⁵⁸

The process to which he refers is one in which men realize that their society is not static, but capable of "growing" politically, socially, and economically. As the objective needs and the population's consciousness of these needs increase, there is an increase in the level of political demands. New political demands in turn require new conceptions of the political system, and in this way social mobilization tends to encourage the process of political socialization.

Political Socialization

Political socialization is defined by Almond and Coleman as,

the process of induction into the political culture. It's end product is a set of attitudes -- cognitions, value standards, and feelings -- toward the political system, its various roles, and role incumbents. It also includes knowledge of, values affecting and feelings toward the inputs of demands and claims to the system, and its authoritative outputs.⁵⁹

As Almond and Coleman point out, this process of socialization begins in the family unit (latent socialization)

⁵⁸Karl W. Deutsch, "Social Mobilization and Political Development", The American Political Science Review, September 1961, p. 494.

⁵⁹G. A. Almond and J. S. Coleman (eds.), The Politics of the Developing Areas, Princeton University Press, Princeton, 1960, pp. 27-28.

and it is here that the effects of social mobilization are most clearly felt. Political socialization through school, work and various associations (manifest socialization) develops. The entire process has the effect of causing people to identify with a common political culture and in this extended form the socialization process becomes "integrative".

Integration

The model shows that "integration" has been accepted as a criterion of political development by many scholars. It follows that there is a wide variation in interpretations of the concept. However, using Myron Weiner's categorizations⁶⁰ (national integration; territorial integration; value integration; elite-mass integration; integrative behavior), we find that most authors' definitions fall under "national integration" or "value integration". Lipset⁶¹ and Almond and Powell⁶² subscribe to the idea of the integration of aspirations and values so as to lessen the gap between various social groups. Huntington⁶³ and

⁶⁰Myron Weiner, "Political Integration and Political Development", in Political Modernization, Calude E. Welch (ed.), op. cit., pp. 150-152.

⁶¹Seymour Martin Lipset, Political Man, Doubleday and Company, New York, 1960, pp. 22-24.

⁶²Gabriel A. Almond and Bingham Powell Jr., Comparative Politics, Little, Brown and Company, Boston, 1966, p. 35.

⁶³Samuel Huntington, op. cit., p. 10.

Emerson,⁶⁴ on the other hand, see integration as basically a nation-building process and the creation of a national identity (although Huntington also sees integration somewhat in the "integrative behavior" aspect -- which he calls "coherence").

This total process, from social mobilization to integration, can be termed "political growth". It involves the gradual acceptance of common attitudes and values insofar as the political process is concerned, and thus the creation of a political cultural identity which encompasses and supercedes other subcultures.

Positive Political Structural Change

This aspect of political development is concerned with the structural changes which occur within a political system. As stated by Gabriel A. Almond, one of the originators of the structural-functional school,

We are arguing that the classic distinction between primitive societies which are states and those which are not should be reformulated as a distinction between those in which the political structure is quite differentiated and clearly visible and those in which it is less visible and intermittent. We are dealing with a continuum and not a dichotomous distinction.⁶⁵

⁶⁴Rupert Emerson, "Nation-building in Africa", in Nation-Building, Karl W. Deutsch and William J. Foltz (eds.), Atherton Press, New York, 1966, pp. 95-116.

⁶⁵Gabriel A. Almond, op. cit., p. 12.

In this sense, political development can be seen as a movement within the political structure itself. As the model indicates, political scientists have created two parallel semantic paths by which this structural development can be described. Both deal with approximately the same concepts, using different terminology.

Institutionalization

This term, defined by Huntington as "the process by which organizations and procedures acquire value and stability",⁶⁶ and measured in terms of autonomy, coherence, complexity and adaptability, is an all-encompassing term which includes the concepts of "structural differentiation" and "specialization", as well as Needler's "constitutional integrity". The relationship between these terms can best be explained by examining their definitions in conjunction with the use of Figure 2.

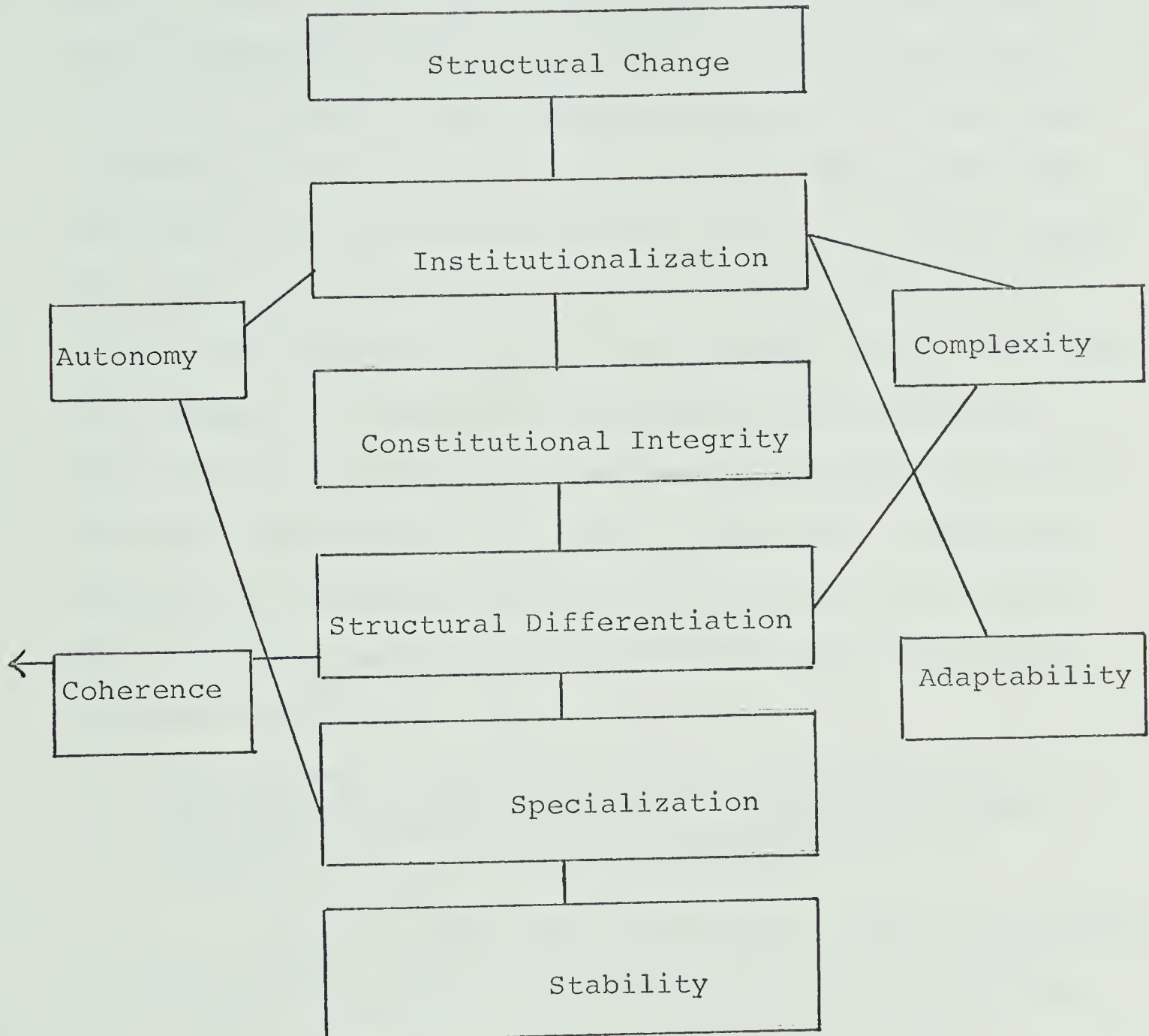
Structural differentiation, as seen by Gabriel Almond in 1960, involved,

. . . the emergence of legislatures, political executives, bureaucracies, courts, electoral systems, parties, interest groups, media of communication, etc. with each structure tending to perform a regulatory role for that function within the political system as a whole.⁶⁷

⁶⁶Samuel Huntington, op. cit., p. 12.

⁶⁷Gabriel Almond, op. cit., p. 18.

DIAGRAM 2



In this context, the term has the same meaning as Huntington's conception of "autonomy".⁶⁸ Both speak of the development of political institutions which are independent of the interests of a particular social group. Huntington takes the concept a step further by arguing that the more "complexity" found in these institutions, the greater the indication of political development because, "[t]he greater the number and variety of subunits the greater the ability of the organization to secure and maintain the loyalties of its members."⁶⁹ Almond also made use of the concept of "specialization" to denote the "functional distinctiveness" of these institutions,⁷⁰ but in a later work, re-defined "structural differentiation" so as to include the idea of specialization. This latter definition sees "structural differentiation" as,

The process whereby roles change and become more specialized or more autonomous or whereby new types of roles are established or new structures and subsystems emerge or are created.⁷¹

It can be seen that the phrase, "the process whereby roles change" (Almond and Powell) has the same meaning

⁶⁸ Samuel Huntington, op. cit., pp. 20-21.

⁶⁹ Ibid., p. 18.

⁷⁰ Almond, op. cit., p. 18; Pye, op. cit., defines specialization as "[t]he equivalent of a division of labor within the realm of government", p. 47.

⁷¹ Almond and Powell, op. cit., p. 22.

as Huntington's concept of "adaptability". Both authors speak of the ability of political institutions to change their roles and functions as values and attitudes change within a society, as indicating political development. Since "coherence", Huntington's fourth criterion of institutionalization has been shown to be a part of "integration", it will not concern us at this point.

The final indicator of positive political structural change is that of stability. Samuel Huntington sees this concept as being a function of the strength of the political parties within a political system, and defines party strength as "the extent that it has institutionalized mass support."⁷² Needler defines stability as "[t]he regular functioning of the polity in accordance with the norms it posits for itself."⁷³ Lerner speaks of stability as being dependent upon the degree of frustration of the polity, or the imbalance between achievement and aspirations.⁷⁴

Both Needler's and Lerner's definitions see stability as dependent upon a satisfied society. Huntington again takes the concept a step further by making the

⁷²Huntington, op. cit., p. 408.

⁷³Martin C. Needler, Political Development in Latin America, Random House, New York, 1968, p. 5.

⁷⁴Daniel Lerner, "Toward a Communication Theory of Modernization", in Communications and Political Development, L. W. Pye (ed.), Princeton University Press, 1963, pp. 331-333.

assumption that this satisfaction or "regular functioning" of the polity will manifest itself in party strength, through the institutionalization process. By combining the three definitions, "stability" can be seen as the regular functioning of the polity, manifested through strong political parties, and based upon the degree to which the achievements and aspirations coincide with the posited norms of a particular society. Because of the greater comprehensiveness of the "institutionalization" and "stability" approach, positive structural political change will be defined in these terms.

Equitable Political Distribution

The concept of "equitable distribution" in the political sense can best be conceived of as "participation", meaning "the extension of the polity to include the maximum number of participants taking part in the political processes on terms of equality."⁷⁵ Since this term has already been cited as an example of political terms which do not have universally congruent meanings, it will be necessary to extend the above definition in order to overcome this difficulty. Fortunately, Samuel Huntington has done exactly this. He points out that,

Broadening participation in politics may enhance control of the people by the government, as in

⁷⁵Needler, op. cit., p. 5.

totalitarian states, or it may enhance control of the government by the people, as in some democratic ones. But in all modern states the citizens become directly involved in and affected by governmental affairs.⁷⁶

By speaking in these terms, and in effect refraining from making any normative implications, "participation" can have universal applicability.

The three processes through which participation evolves are "interest articulation", which is "[t]he process by which individuals and groups make demands upon the political decision-makers";⁷⁷ and "political recruitment", defined as "the function by means of which the roles of political systems are filled."⁷⁸

Since these terms are clearly and explicitly defined, and universally acceptable because of their objectivity, it will not be necessary to explicate their functions any further nor to elaborate upon their meanings. The entire process of "equitable political participation" can thus be seen as the involvement of as great a portion of the polity as possible in the political system in a manner which is congruent with the norms and values of a particular society.

Now that the three criteria of political development have been established and defined, their functions can

⁷⁶Huntington, op. cit., p. 5.

⁷⁷Almond and Powell, op. cit., p. 73.

⁷⁸Ibid., p. 98.

⁷⁹Ibid., p. 47.

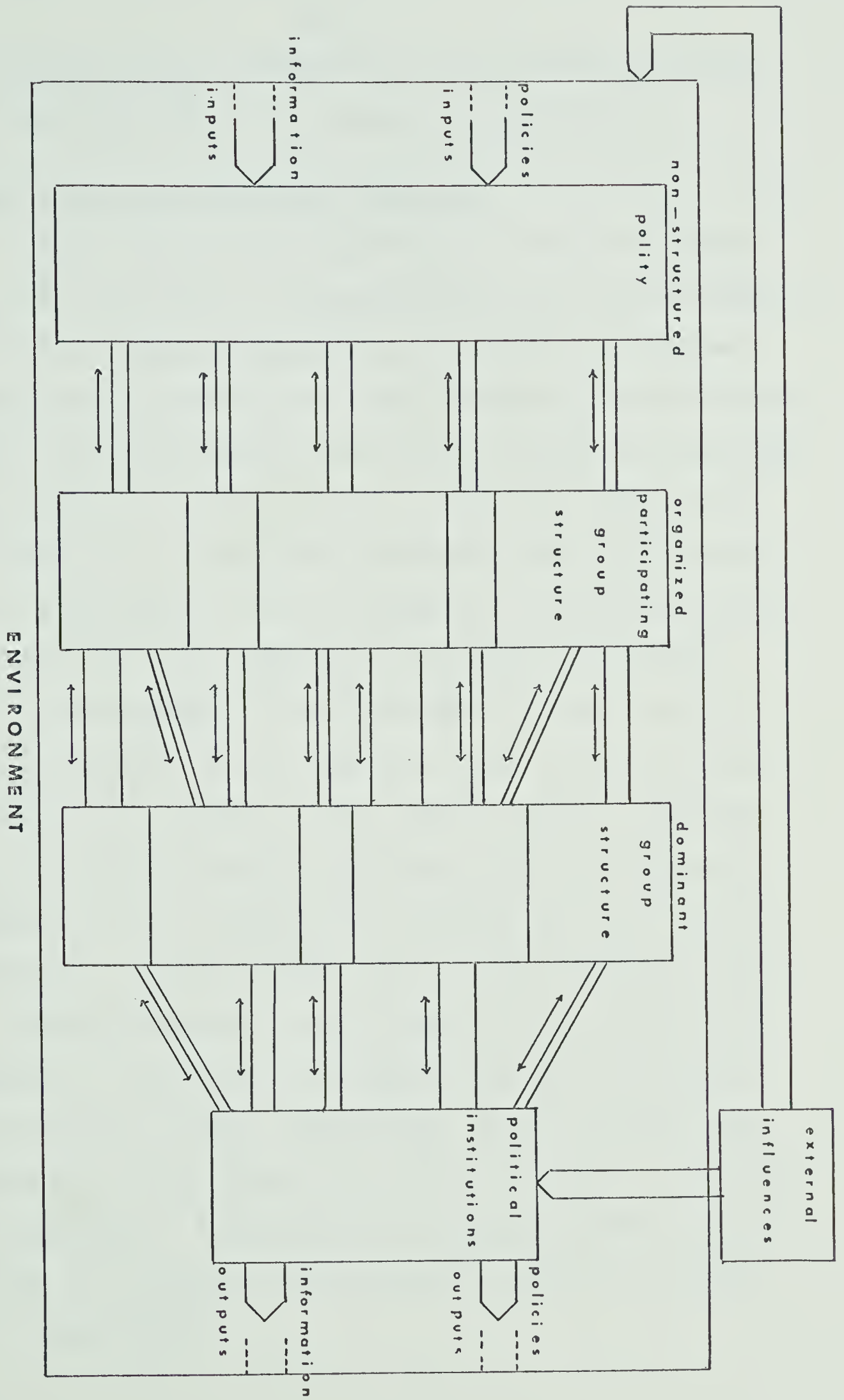
best be illustrated by relating them to Diagram 3, which depicts the structure of a political system. A brief description of each "box" is first necessary.

Dominant Group Structure

Every political system has one or more groups of elite who, through their ability to control, dominate or represent various groups of the polity, have the "power capabilities"⁸⁰ to influence or establish political policy. For example, in a typical Latin American country, the dominant group structure would consist of a landowner elite, an industrial-commercial elite, a religious elite, a military elite, and perhaps an organized labor elite. In a highly "democratic" society, the dominant group structure would consist primarily of the various political parties, while in a totalitarian regime it may consist of no more than a small clique surrounding one man. In the latter case, this clique may be identified with a single party of ideological or nationalistic orientation, or merely represent a charismatic leader.

It should be pointed out that in the case of both the dominant group structure and the organized participating group structure, the size of the box and sub-divisions

⁸⁰A term formulated by Charles W. Anderson in "Toward A Theory of Latin American Politics", in which he defines it as "the property of a group or individual that enables them to be influential in political affairs, in other words, a political resource", p. 5.



within each box are an indicator of the relative strength of each group as well as the number of participants.

Organized Participating Groups Structure

These various participating or "interest" groups support and have lines of communication with various segments of the dominant group structure and in certain cases can also communicate directly with the governmental institutions. In certain societies these groups may be directly controlled and organized by the government, in which case their main function may be to communicate "downward" the policies and values of the dominant group structure. In other societies, these groups may have independent interests which they attempt to communicate to the government either directly or through a portion of the dominant group structure which they support. An example of the latter type is a British labour union which supports the Labour party and through this dominant group attempts to influence government policy. North American pressure groups such as the chambers of commerce, the manufacturers' associations, etc., can be cited as examples of organized participating groups who support specific dominant groups (monetarily) and who communicate their demands either through the dominant group or directly to the government. Participating groups can also be ethnic, linguistic or religious organizations, as well as occupational or ideological.

Non-Structured Polity

This box consists of the majority of people in a society. The size of the structure will indicate the number of people who are potentially capable of participating politically. It will therefore include those who are not franchised (literacy requirements, sex, geographic isolation, etc.) for various reasons but who may still exert pressures upon the government and support certain organized groups.

The other four boxes need little explanation since their functions are intrinsic in their titles. It should be noted, however, that their size at a particular time is an indication of their relative strength.

Communications

Each structure is related in varying degrees with the other structures. The degree to which these relationships hold is to a large extent a function of the communications between each structure. Since the entire model is dynamic, that is, the various structures and sub-structures change in size continually, as does the flow of communications, a blockage or lack of communication between two structures will cause pressures (demands) to increase, which may manifest themselves in some form of instability or malfunctioning of the system.

Political Growth

Political growth, as related to the structural-functional model, can be ascertained by the degree to which lines of communication are available between the three main structures. A high degree of communication between the non-structured polity, the organized participating groups and the dominant structure indicates that the society has certain common values and goals which act as an integrative device. Through "societal welfare" and "social demands", the processes of socialization and mobilization take place and are communicated to the structured and unstructured polity. The "external influences" structure diminishes in size over time as the government and people adopt a more nationalistic attitude.

Political Structural Change

The model indicates structural change in several ways. Firstly, over time the "government institutions" box must increase in size in order to accommodate the increasing complexity and autonomy of a developing society. Secondly, the degree of stability can be seen in the model over time by (1) comparing the relative sizes of the "societal welfare" and "social demands" boxes. If societal welfare is greater than, or equal to, social demands, the aspirations and expectations of the people should be such that pressures on the government would not increase. (2) Stability can

also be seen in the model as maintenance of the same dominant group structure. The adaptability of this structure can be seen by its ability to absorb new groups (increase in size) and by the ability of the various groups within the structure to willingly accept changes in relative strengths (changes in the sub-group sizes).

Equitable Political Distribution

Equitable political distribution, or participation, is shown in the model by (1) the relative increase over time in the organized participating group structure. As the aggregation function of the society increases, a larger portion of the polity will begin to actively participate in politics. (2) The lines of communication between the non-structured polity and the organized participating groups will increase and widen as more people begin to articulate their political demands. (3) Lines of communication between the organized participating groups and the dominant group structures will increase and widen as members of the participating groups begin to move into the dominant group structure while policy demands flow in either direction depending upon the type of political structure and society.

With this concept of political development in mind, an examination of the relationship between political development and land distribution within the six Latin American countries being studied will be undertaken. The

following table (Table XIV) summarizes the relationships found between 23 indicators of political development and the Gini ratio of land distribution. Each indicator will be discussed separately.

Political Growth

Integration.

Indians and Land Distribution -

In order to be politically integrated, a population must think of themselves as belonging to a nation and accept the values and norms of the national society. In all six countries being studied, the Indians, while making up a significant proportion of the population, do not have any clear notion of nationhood or national values. Numerous authors suggest that the barriers which exist between these people and the rest of society bear little relation to racial differences, but are to a great extent a matter of cultural, social and economic factors.⁸¹ The use of the word "Indian" varies greatly in Latin America, but

⁸¹See: Stanislaw Andreski, Parastism and Subversion, Weidenfeld and Nicolson, London, 1966, p. 153; Norman A. Bailey, Latin America in World Politics, Walker and Co., New York, 1967, p. 19; Andrew Pearse, "The Indians of the Andes", in Latin America, Claudio Veliz (ed.), Frederick A. Praeger, New York, 1968, p. 690; Anibal Q. Obregon, "Contemporary Peasant Movements", in Elites in Latin America, S. M. Lipset and A. Solari (eds.), Oxford University Press, New York, 1967, pp. 327-329.

TABLE XIV

SPEARMAN RANK - CORRELATION COEFFICIENTS FOR CORRELATIONS
 OF LAND OWNERSHIP DISTRIBUTION WITH 23 INDICATORS OF
 POLITICAL DEVELOPMENT - CIRCA 1955-1965

Indicators of Political Development	Land Dist.	N
Integration -		
1. Amerindians as a % of total population	.95	5
2. Central government exp. on education as % of total exp.	-.27	6
3. Population per commercial vehicle	.83	6
4. Population per private vehicle	.60	6
Political Socialization -		
5. % population in metro. areas of 100,000 or more	.83	6
6. % population having completed secondary ed. but no more	.70	5
7. % pop. in intermediate and senior grades of employment	.80	5
Social Mobilization -		
8. Daily newspaper circulation per 1,000 pop.	.82	6
9. Radios per 1,000 population	.55	6
10. Number of people per newspaper	.72	6
Institutionalization -		
11. Direct tax as a % of total revenue	.80	5
12. Expenditure on defence as a % of total revenue	.83	6
13. Years of constitutional government	.83	6
Stability -		
14. Number of military interventions	.95	6
15. Deaths from domestic group violence	.66	6
16. Ratio of armed forces to population	.98	5
Participation -		
17. Percentage of pop. voting in last election	.81	6
18. Fitzgibbon and Johnson "democratic" rating	.88	6
Recruitment -		
19. % of population having better than secon- dary education	.66	5
20. University students as a % of population	.60	5
21. Urban middle class as % of total urban pop.	.70	5
Interest Aggregation and Articulation -		
22. Organized labour as a % of total labour force	.26	6
23. % of population that is literate	.25	6

generally refers to people who think of themselves as a distinct social group. The remainder of society recognizes and treats them as such, so that there is little ambiguity of identity. However, as Andreski points out,

An Indian who learns to speak Spanish well, dresses in town clothes and leaves his ancestral village ceases to be regarded or to regard himself as an Indian.⁸²

Since a major part of becoming "de-indianized" lies in leaving the rural environment, it can be stated that the great majority of "indians" are involved in agricultural occupations, and therefore that a significantly large portion of the peasantry are Indians.

The high correlation between the proportion of Indians in the population and the distribution of land (.95) would suggest that the latifundios are instrumental in rigidifying the cultural, social, political and economic life of the Indians. Verification of this important thesis must rely to a great extent upon observations of various Latin American scholars but some empirical evidence, particularly regarding economic activities, is beginning to emerge.

Ronald James Clark, analyzing the changes in peasant market participation in a portion of Bolivia, found

⁸²Andreski, op. cit., p. 152.

that a high proportion of peasants entered the money economy subsequent to land reform in 1953. He also found that land reform created new channels of communication between the peasants and buyers from the cities. These commercial contacts, he felt, were instrumental in changing attitudes and expanding the social, political and economic horizons of the peasantry.⁸³

Sergio Maturana-Medina studied economic development within the municipal district of Paracho, Mexico and found among other things that peasants owning their own land had a favourable attitude toward change and were more willing to be employed in non-farm activities than those living on communal farms.⁸⁴

E. J. Hobsbawm, examining the relationship between land tenure and political attitudes in an area of Colombia, found that peasants living on traditional haciendas and minifundio farmers were largely conservative, while the workers on large, plantation-type farms were more susceptible to political change and subsequently instability.⁸⁵

⁸³Ronald James Clark, "Land Reform and Peasant Market Participation on the North Highlands of Bolivia", Land Economics, Vol. 44, 1968, pp. 153-159.

⁸⁴Sergio Maturana-Medina Paracho, The Economics of Development in a Mexican Smallholder Community, Research paper 32, October 1968, Land Tenure Center, University of Wisconsin, Madison.

⁸⁵E. J. Hobsbawm, "Peasants and Rural Migrants in Politics", in The Politics of Conformity in Latin America,

Transportation and Integration

National integration also requires a transportation system by which urban-rural relationships can take place. The peasant can develop a sense of nationalism only by seeing or communicating with other sectors of the society. Neale J. Pearson graphically illustrates this need.

Peasants in the Department of Cuzco, Peru, for example, may have to walk two or three days to seek the aid of Quechua-speaking Aprista lawyers, because of the geographical barriers to communication in the sierra or landowner control of the means of communication in the area.⁸⁶

Population per commercial and private vehicle have been chosen as transportation indicators based on the assumption that the availability of road transportation should be indicative of the degree to which urban and rural society intermixes. In both cases, land distribution is positively correlated with these indicators (.83) and (.60). It is particularly significant that commercial vehicles, including trucks and buses (both standard means of transportation in Latin America) is highly associated with land distribution. This would suggest that since landowners discourage the movement of peasants as much as possible, the incidence of latifundios would affect the amount of

⁸⁶Neale H. Pearson, "Latin American Peasant Pressure Groups and the Modernization Process", Journal of International Affairs, Vol. 20, 1966, p. 315.

commercial vehicles necessary to service the demands of the rural population.

Government Expenditure on Education and Integration

Theoretically, it would seem logical to assume that governments interested in creating national values and a national identity for their citizens would utilize the educational system for this purpose. It should follow that educational expenditures as a percentage of total government expenditures would be positively associated with those nations most concerned with this problem. Because it is to the political and economic advantage of large rural landowners to maintain a high degree of isolation between peasants and the rest of society, there would seem to be good cause to assume a positive correlation between government expenditure on education as a percent of total government expenditure and degree of land distribution. However, as the coefficient shows ($-.27$), this is not the case. In fact there is an inverse relationship between these two indicators.

Before assuming that the above hypothesis has been rejected, it should be pointed out that the dependent variable (expenditure on education) is an aggregate figure which does not distinguish between urban expenditures and rural expenditures, and it is in the rural areas that the landowners exert the greatest influence on government policies. Until such time as data are available to show

the rural and urban break-down, analysis of the results obtained must remain no more than a conjecture.

Political Socialization

Percent of population in metropolitan areas of 100,000 or more. The shift from rural to urban residence is widely regarded as a phenomenon that will contribute to the growth of those values associated with modernity. Urbanization itself is often accepted as an independent variable positively correlated with a particular set of values. Joseph La Polambara's description of the effects of urbanization is characteristic of this assumption:

One might argue that urbanization itself, whatever its causes, will necessarily bring some change in political culture. . . . New and different associative patterns are encouraged which will inevitably impinge on parochial and traditional values and attitudes.⁸⁷

Joseph A. Kahl tested this widely held hypothesis and found that in Brazil and Mexico urbanization alone had little relationship to developmental attitudes.⁸⁸ In another study, Kahl concluded that occupational position

⁸⁷ Joseph La Polambara, "Italy: Fragmentation, Isolation and Alienation", in Lucian W. Pye and Sidney Verba (eds.), Political Culture and Political Development, Princeton University Press, Princeton, 1965, p. 326.

⁸⁸ Joseph A. Kahl, "Social Stratification and Values in Metropli and Provinces: Brazil and Mexico", America Latina, Vol. 8, No. 1, 1965, p. 28.

had more influence on a man's modernity than his location in a metropolis or provincial town.⁸⁹ In conjunction with this evidence, various authors have shown that manufacturing activities and services (or secondary and tertiary industries) in Latin America are highly concentrated in large urban centers, as are government employees.⁹⁰

For these reasons it was felt that attitudinal changes leading to political socialization would most likely occur in urban centers of a relatively large size rather than in all areas classified as "urban". The relatively high correlation between the percentage of population living in large metropolitan areas and distribution of land (.83) suggests that a greater rural-urban labour migration takes place in countries with a more equitable land distribution. This may result in less rural underemployment -- a thesis which is worth further investigation.

Population Having Completed Secondary Education But No More

Lucian Pye, discussing the effect of education on the political socialization process, points out that,

The political socialization process involves not only the deeply instilled attitudes and sentiments of early

⁸⁹ Joseph A. Kahl, "Urbanizacao E Mundancas Ocupacionais No Brasil", America Latina, No. 4, 1963, pp. 28-29.

⁹⁰ Peter R. Odell, "The Geography of Latin America's Economic Development", in Latin America, Claudio Veliz (ed.), op. cit., p. 481; J. P. Cole, Latin America: An Economic and Social Geography, Butterworth Co., London, 1965, p. 83.

childhood and family life but also the later experience of explicit instruction in politics at school. . . .⁹¹

This point of view is widely held and needs little corroboration. The relationship between land tenure and educational opportunities or incentive for education is not as easy to perceive. Solon Barraclough explains the manner in which land tenure practices can act as a deterrent to education. He states,

The latifundia do not depend for their successful operation upon an educated work force supplemented by large numbers of extension agents, etc. In fact, such a development would destroy the system in short order. The traditional work relationships and social stratifications are based upon manipulating an uneducated, inarticulate and largely uninterested work force.⁹²

He also argues that even when schools are provided, the effect on the peasant is negligible, and that to understand why,

. . . one must also take into consideration the worker's position in the system. Within the latifundia there is almost no possibility of escape from his socially subservient and economically dependent status. The result is that the rural family sees little value in sending their children to school at all and no value at all in learning more than a bare minimum of reading and arithmetic.⁹³

⁹¹Lucian W. Pye, Political Culture and Political Development, Princeton University Press, Princeton, 1965, p. 10

⁹²Solon Barraclough, Agrarian Structure and Education in Latin America, paper prepared for a conference on education and social and economic development in Latin America, Santiago, Chile, March 1962, UNESCO/ED?CEDES/30, p. 16.

⁹³Ibid., p. 17.

The effect of land reform on the educational system and the attitudes of the people were observed at close hand in a study done by a Cornell University team in collaboration with the government of Peru.⁹⁴ A new school was established on land recently distributed to former latifundia sharecroppers. Teachers were provided, but the actual operation of the school was entrusted to the parents of the school children. Among the most significant changes noted was the fact that education became a "value" within the village. Prior to the project parents were resistant to formal education, not only because it came from the outside world, but also because children were needed at home for work. After the project had been put into operation there was a notable change of attitude and behavior on the part of the parents. They not only increasingly sent their children to school, but became prouder of their children's attainments. There was greater attendance by parents at school events, and, "more than any other aspect of the Cornell-Peru project, the school became the symbol of progress and hope for the future."⁹⁵

The views of Barraclough and the observations of Whyte and Holmber are corroborated by the findings of this

⁹⁴As reported by W. F. Whyte and A. R. Holmber in "Human Problems of U.S. Enterprise in Latin America: The Cornell-Peru Project", Human Organization, Vol. 15, Fall 1956, pp. 15-18.

⁹⁵Ibid., p. 17.

paper which show that the education indicator has a positive correlation of .70 with the distribution of land. It should be noted that secondary education figures were used rather than those of primary education because, unlike almost all other indicators, education measurements show inputs, rather than outputs. That is to say, primary education data show the initial enrolment rather than the number graduating. By using secondary enrolment figures, there is more assurance that the portion of the population involved has been exposed to schooling for a number of years.

Population in Intermediate and Senior Grades of Employment

The relationship between occupations and developmental attitudes has already been discussed in the first portion dealing with political socialization and it is primarily for the reasons previously mentioned that the indicator was chosen. The high correlation between this occupational indicator and the distribution of land (.80) cannot easily be explained. It can only be assumed that a more equitable distribution of land, linked with certain intervening economic variables, causes changes in attitudes toward non-rural types of occupations.

Social Mobilization

Karl W. Deutsch notes that, ". . . any one of the forms of social mobilization . . . should be expected to be accompanied or followed by rise in . . . exposure to mass

media of communication. . . ." ⁹⁶ It is with this communication aspect of social mobilization in mind that three indicators of communication were chosen to represent this facet of development.

Daily newspaper circulation per 1,000 population and radios per 1,000 population are standard indicators used to measure mobilization. ⁹⁷ Both are means by which people's interests and demands are aroused and which ultimately result in greater involvement in societal affairs. The high correlation between newspaper circulation and land distribution (.82) is an important relationship, supporting the association between literacy, education and land distribution, since literacy is an obvious prerequisite to the buying of a newspaper. The relatively lower correlation between the "radio" indicator and land distribution (.55) could involve various factors including the geographical barriers in the regions of the Andes, the cost of the radio, and the linguistic differences between rural and urban areas where Indian dialects and Spanish may respectively be spoken.

The final social mobilization indicator, number of

⁹⁶ Karl W. Deutsch, op. cit., p. 494.

⁹⁷ See for examples: Deutsch, ibid., p. 507; Ernest A. Duff and John F. McCamant, "Measuring Social and Political Requirements for System Stability in Latin America", American Political Science Review.

people per newspaper, was chosen because it was felt that a greater number of newspapers should offer a more varied outlook on political affairs, and in this way increase the interest and reactions of the polity.

While the governments of most Latin American countries exercise a great deal of indirect control over the press through regulations governing the licensing of publications, the correct professional registration of journalists and the allotment of newsprint quotas,⁹⁸ most newspapers are owned by major economic pressure groups and it can be assumed that each will be presenting the news, and editorializing so as to best present their particular points of view.

The above-mentioned indicator is correlated .72 with land distribution. Again, the reasons for this association are complex, but would seem to involve a greater interest and awareness among the polity, and thus the necessity for greater competition among interest groups and political parties.

Institutionalization

The indicators selected to represent this concept of political development were chosen on the basis of one criterion of the term -- adaptability. Huntington sees

⁹⁸Segio De Santis, "The Latin American Press", in Latin America, Caludio Veliz (ed.), op. cit., p. 830.

adaptability as, ". . . an acquired organizational characteristic. It is in a rough sense, a function of environmental challenge and age."⁹⁹ He argues that since environmental challenges can vary a great deal, the adaptability of an organization to these challenges can be measured by its age. This, in turn, can be measured chronologically, by generational age, and in functional terms.¹⁰⁰

The indicator, years of constitutional government, is a simple measure of adaptability, and shows a correlation of .83 with land distribution. This would suggest that within the six nation sample, governments tend to be more long lived as the distribution of land becomes more equal. It is recognized that several major criticisms can be made of the use of this indicator and the analysis of the correlation. Firstly, government longevity can also be a function of the coercive power of a state and the degree of traditionalism which exists among the people. Certainly nations such as Saudi Arabia and Ethiopia cannot be viewed as having "adaptable" governments because of the length the present regimes have been in power. However the situation in Latin America is somewhat different. In most Latin American nations enough political acculturation has taken

⁹⁹Samuel Huntington, op. cit., p. 13.

¹⁰⁰Ibid., pp. 13-15.

place to create an awareness of coercion at least among various elite groups.¹⁰¹ Thus, while a coup precipitated by various elements within the dominant group structure, because of government constraints, may do no more than replace one coercive government with another, the years of "constitutional" government are still cut short.

A second, more important criticism of the correlation is that because the Gini ratio is static, that is, it shows the distribution of land at one specific time rather than changes in land distribution, this particular measure of association is not indicative of the "adaptability" of the system. The reply to this argument is simply that the coefficient shows relative degrees of adaptability between the six nations rather than within each nation at a particular time.

Direct tax as a percentage of total revenues, and expenditure on defence as a percentage of total expenditure are both indicators of the functional aspect of the "adaptability" criterion. As Huntington points out, "[i]nstitutionalization makes the organization more than simply an instrument to achieve certain purposes."¹⁰² Since direct taxes such as income tax and property tax are normally more

¹⁰¹Theodore Wyckoff, "The Role of the Military in Latin America Politics", Western Political Quarterly, Vol. 13, No. 3, September 1960.

¹⁰²Samuel P. Huntington, op. cit., p. 15.

progressive than indirect taxes such as sales taxes or various tariffs, and would therefore be felt to a greater extent by the higher income strata of society, the degree to which direct taxation is used should be indicative of the power and influence of the higher income groups. The relatively high correlation between the direct tax indicator and land distribution (.80) lends support to this thesis, since the landowners obviously make up a large portion of this high income group in most of the countries.

Defence expenditures can similarly be used to measure the degree to which the military elite influences government expenditures. Latin American armed forces are rarely considered primarily as means of defence against external threat.¹⁰³ Their concern lies with various internal problems. Defence expenditures, however, do not reflect only the state of internal stability, but are more a function of the strength of the military elite. Stanislaw Andreski, discussing this aspect of the military in Latin America, points out that,

In relation to their size and lack of equipment these forces (Latin American) are extremely expensive, owing to the disproportionately large numbers of high-ranking officers, retired or on active service, all of whom receive high emoluments. Argentina, for

¹⁰³For complete discussions on the role of the Latin American armed forces, see Edwin Lieuwen, Arms and Politics In Latin America, Frederick A. Praeger, New York, 1960, pp. 122-153; Edward Bernard Glick, "The Nonmilitary Use of the Latin American Military", in Latin America, Norman A. Bailey (ed.), Frederick A. Praeger, New York, 1965, pp. 179-191.

instance, has as many generals as the United States.¹⁰⁴

Edwin Lieuwen corroborates this view by giving empirical evidence of the extent of military expenditures.

One of the chief impediments to real economic progress in nearly all Latin American countries . . . was the inflated demands the armed forces made upon government revenues. Traditionally, since the turn of the century, the armed forces' reported share of the national budget averaged about 20-25 per cent annually in most Latin American countries. Official figures of war navy departments, however, do not tell the whole story. Sizable appropriations for the armed forces amounting to perhaps 5 per cent of the total budget, were often concealed in appropriations for the ministries of interior, public works, and communications.¹⁰⁵

A correlation of .83 between expenditure on defence as a percentage of total expenditure and land distribution indicates that a more equitable distribution of land tends to be associated with a lower degree of military influence and therefore that the distribution of the ownership of land would influence the creation of institutions which are more aware of public demands rather than the demands of particular interest or dominant groups.

Stability

Stability, and its converse instability, have become favorite subjects of analysis for those political scientists interested in Latin America and other lesser developed regions. Theories attempting to explain this

¹⁰⁴Stanislav Andreski, op. cit., p. 73.

¹⁰⁵Edwin Lieuwen, op. cit., p. 147.

phenomenon range from those in which instability is seen as a function of the "Hispanic culture" and the authoritarian institutions which this culture supports,¹⁰⁶ to the more conventional theories which view instability as caused by various psychological, social, economic or political inconsistencies within the society.¹⁰⁷

While there is a great deal of disagreement as to what are the causal factors of instability and their relative weights, most authorities would agree with the statement that,

Instability may be reflected in increasing repression by the authorities, by violent or non-violent demonstrations, by runaway inflation, by coups d'etat, by civil war, or ultimately by social revolutions.¹⁰⁸

The three indicators chosen to measure stability/instability are representative of these possible actions. Number of military interventions represent coups d'etat. Deaths from

¹⁰⁶William S. Stokes, "Violence as a Power Factor in Latin American Politics", Western Political Quarterly, Vol. 5, No. 3, September 1952.

¹⁰⁷See: Ernest A. Duff and John F. McCamant, op. cit., Merle Kling, "Toward a Theory of Power and Political Instability in Latin America", Western Political Quarterly, Vol. 9, No. 1, March 1956; Manus Midlarsky and Raymond Tantler, "Toward a Theory of Political Instability in Latin America", Journal of Peace Research, March 1967.

¹⁰⁸Ernest A. Duff and John F. McCamant, op. cit.,

domestic group violence measure the effect of violent demonstrations (however this term may be defined), and ratio of armed forces to population is indicative of the degree of repression by the authorities.

The relationship between land distribution and the three indicators of stability/instability can be seen as the relationship between the rural landlord and two groups holding distinctly different reasons for opposing this rural elite. Diagrammatically, the relationship would appear as follows:

PEASANTS \longleftrightarrow LANDLORDS \longleftrightarrow COMMERCIAL-IND. ELITE

The friction, or potential conflict between the two agrarian based groups is relatively easy to describe. Both groups, while worlds apart in social, economic and political views, are dependent upon the land for their livelihood and social status. Their conflict therefore revolves around the issue of the ownership of the land. The conflict between the two elite groups is more complex.

It is generally recognized that the governments of most Latin American countries still consist of, or are controlled by, various elite groups¹⁰⁹ and that in nations

¹⁰⁹Stanislav Andreski, op. cit., p. 132; Martin C. Needler, "Latin America: Dimensions of Variation", in Political Systems of Latin America, Martin C. Needler (ed.), D. Van Nostrand Co., Princeton, 1964, p. 518; Jacques Lambert, op. cit., p. 183.

characterized by highly skewed land distribution, the landlords are invariably in this position of power.¹¹⁰ Since coups are usually regarded as arising from conflicts within these elite groups,¹¹¹ the fact that the number of military interventions is highly correlated with land distribution (.95) would suggest that a fundamental conflict of interest exists between the landlords and some other elite groups.

In support of this hypothesis, Albert Hirschman, in his study of the process that led to the passage of the Colombian land reform law in 1961, argues that an important phenomenon in some Latin American countries is the growing friction among the industrialists, the urban commercial powers, and the traditional landed elite. The desire to increase domestic purchasing power and to decrease imports of food are factors which are of common interest to the industrialists, the commercialists and the urban labour

¹¹⁰V. Webster Johnson, "Significance of Land Ownership in Land Reform", Land Economics, Vol. 42, 1966, p. 22; Robert J. Alexander, op. cit., p. 562; William Thiesenhusen and Marion Brown, Survey of the Alliance of Progress, Land Tenure Center, University of Wisconsin, 1967, p. 12; Peter Dorner, "The Influence of Land Tenure Institutions on the Economic Development of Agriculture in Less Developed Countries", paper prepared for the Land Tenure Center, University of Wisconsin, Madison, 1967, p. 9; Solon Barraclough and Arthur Domike, Agrarian Structure in Seven Latin American Countries, Land Tenure Center, Madison, 1966, p. 392.

¹¹¹Martin C. Needler, Political Development in Latin America, op. cit., p. 64; Richard N. Adams, "Political Power and Social Structures", in The Politics of Conformity in Latin America, Claudio Veliz (ed.), Oxford University Press, 1967, p. 28.

movements. The inability or disinclination of the traditional agrarian system to adjust its production methods so as to fulfill these needs creates a conflict of interest which is difficult to resolve.¹¹² Thomas F. Carroll argues that this divergence of views resulted in the successful passage of the Sao Paulo agrarian transformation bill in 1961.¹¹³

The role of the military must also be taken into consideration as a potential opposition group to the rural elite and a possible factor in the association between coups and land distribution. Traditionally, the military were defenders of the status quo¹¹⁴ and thus supported the landed aristocracy. However the twentieth century has witnessed the emergence of Nasserista movements among the military in which the role of the armed forces is seen as one of inaugurating change. These reform-minded groups tend to be populist based and therefore, in theory at least, against

¹¹²Albert O. Hirschman, Journeys Toward Progress--Studies of Economic Policy-Making in Latin America, Twentieth Century Fund, New York, 1963, p. 156.

¹¹³Thomas F. Carroll, "Land Reform as an Explosive in Latin America", in Explosive Forces in Latin America, J.J. TePaske (ed.), Ohio State University Press, 1964, p. 107.

¹¹⁴Alistair Hennessy, "The Military in Politics", in Latin America, Claudio Veliz (ed.), op. cit.; Jose Nun, "The Middle Class Military Coup", in The Politics of Conformity in Latin America, Claudio Veliz (ed.), Oxford University Press, 1967, pp. 78-82.

the interests of the landholding elite.¹¹⁵

The correlation between deaths from domestic group violence and land distribution (.66) is positive, but not particularly significant. This low association can be explained in part by an examination of the individual histories of the six countries being studied,¹¹⁶ which reveals that much of the violence which occurred during the years encompassed by the data (1950-1962) took place in urban centers or in isolated mining communities where organized labour groups existed. Peasant organizations until recent years have been relatively few in number, but in those nations in which they do exist, their reactions against the government and the landlords have been violent.¹¹⁷

¹¹⁵Peronismo, with its original support by the radical officers of the GOU (Grupo de Ficiales Unidos), its populist base and neo-socialist policies, provides an example of this type of group, as does the regime of President Belaunde in Peru, which was backed by Nasserist elements.

¹¹⁶Relevant chapters in Needler, Political Systems of Latin America, op. cit.; Claudio Veliz, Latin America, op. cit.

¹¹⁷The Colombian Violencia of 1948 and later, is the best known example of the effect of creating political peasant organizations. The organizations became the means by which the peasants could release some of their long-suppressed frustrations and tensions. Accounts and analyses of this violent period can be found in "La Violencia in Colombia", in Issues of Political Development, Charles W. Anderson, Fred R. Von der Mehden, Crawford Young, Prentice-Hall Inc., New Jersey, 1967; E.J. Hobsbawm, "Peasants and Rural Migrants in Politics", in The Politics of Conformity in Latin America, Claudio Veliz (ed.), op. cit., pp. 52-53.

In those countries in which peasant organizations have been established¹¹⁸, their basic demand has always been their members' right to the land which they cultivate. Especially since the Cuban revolution of 1959, these groups present a threat that if land reform is not carried out, the peasants will attempt to seize the land themselves. The last indicator of stability/instability, the ratio of armed forces to population, also correlates very highly with land distribution (.98) and suggests that those governments with highly unequal distribution of land find it necessary to retain larger armed forces in case of possible peasant unrest.

It can be concluded that there seems to be a significant association between stability/instability and the distribution of land in the six countries, and that in this sense, the unequal distribution of land acts as a barrier to development.

Participation

This concept, which presents certain definitional problems, is also one for which it is difficult to find suitable indicators. The difficulty arises because of the nature of the participatory process in most Latin American countries, and in the role which elections play.

¹¹⁸ Robert J. Alexander, op. cit., p. 563.

Charles W. Anderson points out that in most Western democratic societies, the relative strength of groups competing for political power is measured ultimately by the number of votes cast. In this way the people meaningfully participate in the political process by choosing the 'power contender' whose policies they find most acceptable, and the various contenders accept these results as indicative of the power relationships within the society. In Latin America, Anderson argues, mass participation through the electoral system is only one manifestation of a 'power capability', and its effect therefore is merely to indicate support for certain groups.¹¹⁹ The degree to which such a process can be called 'participation' must thus be taken into account.

The use of voting statistics as an indicator of participation may also be questioned because of the lack of autonomy among the peasants in voting for a particular candidate. It is certainly true that the traditional agrarian system gives the landlords a great deal of leverage in influencing the peasants' votes, since part of the peasants' obligation to his patron is to vote for the candidate favoured by the landlord. However while it is true that the percent of people voting does not necessarily reflect

¹¹⁹ Charles W. Anderson, "Toward a Theory of Latin American Politics", op. cit., pp. 5-7.

the freedom of choice of each voter, the fact that they have been mobilized and are at least to some degree aware of the political process is, in our definition, considered to be participation.

The relatively high degree of correlation between the percentage of population voting in the last election and land distribution (.81) does reflect barriers to voting such as literacy requirements which are present in Ecuador and Peru¹²⁰, since by restricting suffrage to those who are literate, it is obviously not possible to attain a high voting turnout based on the total population.

The Fitzgibbon and Johnson Democratic rating was chosen as an indicator of participation because of the unique and (in the opinion of the author) appropriate method used to formulate this particular rating. A group of forty specialists on Latin America were asked to evaluate the degree of democratic or undemocratic change which has taken place in the twenty Latin American countries, in a given period (5 years). Fifteen social, economic, cultural and political criteria were specified by which the countries were to be rated with varying weights assigned to each

¹²⁰See: Latin America, Claudio Veliz (ed.), op. cit., p. 97 and p. 122.

criterion.¹²¹ For the purposes of this study it is important to note that the two most heavily weighted criteria were, (1) free and competitive elections -- honestly counted votes; and (2) freedom of party organization -- genuine and effective party opposition in the legislature; legislative scrutiny of the executive branch. Both these factors are related to 'participation' as the term has been defined and therefore to some extent justify the use of this rating as an indicator of participation. By rank ordering the six countries being studied according to the ratings of these experts, and correlating these results with the rankings of the same countries based on the Gini index of land distribution, an association of .88 was obtained.

While it can be argued that the ratings of the experts are to a high degree subjective and based upon the personal values of each of the evaluators,¹²² the sample is large enough so that a normal distribution of ideological and cultural values can be expected.¹²³ A further criticism

¹²¹Russell H. Fitzgibbon and Kenneth F. Johnson, "Measurement of Latin American Political Change", American Political Science Review, Vol. 55, No. 3, September 1961.

¹²²Russett, et. al., op. cit., p. 102.

¹²³It should be noted that at the time Russett made this criticism, the authors took their ratings from 20 experts. In the latest survey, this has been increased to 40, thus strengthening the statistical assumptions.

of the study has been made by Phillips Cutright who feels that no expert can have an intimate enough knowledge of twenty countries to order them on a multidimensional scale.¹²⁴ This is a valid criticism although it may underestimate the ability of the human mind to absorb and relate various criteria. However in this study, the Fitzgibbon and Johnson ratings have been used in conjunction with another criterion of participation and, to the extent to which these two indicators corroborate each other, can be taken as support of the general hypothesis.

A further difficulty in choosing indicators of participation other than evaluating the role of elections in the process, arises because of the difficulty in measuring the degree of involvement of the peasants in the political process. While empirical data are not available, certain judgements can be made based on descriptions and discussions of peasant movements and organizations in the six countries.

The first generalization which can be made is that peasant organizations, where they exist, are generally organized and controlled by the government. In this regard, three categories can be distinguished among the six nations.

¹²⁴Phillips Cutright, "National Political Development: Measurement and Analysis", American Sociological Review, April 1963, pp. 253-264.

The first encompasses Mexico and Bolivia, in which a large portion of the peasant population are organized and play a part in the political process. The second group consists of Colombia and Peru, where peasant organizations were established by political parties but were not incorporated into the decision-making process and subsequently became too aggressive and difficult to control. Finally, Ecuador and Paraguay have shown little inclination to organize rural workers or peasants.¹²⁵

¹²⁵The above evaluations are based on the following books and articles: Mexico: M.R. Clark, Organized Labor in Mexico, University of North Carolina Press, Chapel Hill, 1934; W.M. Morton, "The Mexican Political 'Establishment' in Operation", in The Caribbean: Mexico Today, A. Curtis Wilgus (ed.), University of Florida Press, Gainesville, 1964; Martin C. Needler, "The Political Development of Mexico", American Political Science Review, Vol. 55, 1961; Frank R. Brandenburg, The Making of Modern Mexico, Prentice-Hall Inc., Englewood Cliffs, N.J., 1964; L. Vincent Padgett, The Mexican Political System, Houghton Mifflin Co., Boston, 1966; Bolivia: R.W. Patch, "Bolivia: Decision or Debacle", American Universities Field Staff Report, La Paz, 1959; Cornelius H. Zondag, The Bolivian Economy, Frederick A. Praeger Co., New York, 1966; Peter P. Lord, "The Peasantry as an Emerging Political Factor in Mexico, Bolivia and Venezuela", Land Tenure Center, University of Wisconsin, 1967; Columbia: Charles W. Anderson, Fred R. Von der Mehden, Crawford Young, Issues of Political Development, op. cit., pp. 109-119; E.J. Hobsbawm, op. cit., pp. 51-55; Peru: Rosenda A. Gomez, "The Politics of Military Guardianship", in Political Systems of Latin America, Martin C. Needler (ed.); M.P. Troncosa and B.G. Burnett, The Rise of the Latin American Labor Movement, College and University Press, New Haven, 1960, pp. 89-92; Ecuador: M.P. Troncosa and B.G. Burnett, ibid., pp. 86-87; Paraguay: ibid., pp. 87-88, Claudio Veliz (ed.), Latin America, op. cit., pp. 101-110.

The second generalization which can be made is that without some form of land reform, peasant organizations either become militant, or cease to function efficiently. A recent study made on Mexican peasant mobilization into politics emphasizes that it is only through land distribution and other services related to the land, that the government retains a high degree of loyalty among the campesinos.¹²⁶ This view is corroborated by a study of Bolivian peasantry in which it is pointed out that the organization of the peasants was based on the premise of the land reform and only after the campesinos became owners of the land, could other political activities be initiated.¹²⁷

Based on the above discussion and the results of the correlations between the 'participation' indicators and the distribution of land, it can be concluded that the distribution of land is a strong factor in determining the degree to which the rural population of the six countries participate in the political process.

Recruitment

The use of percentage of population having better than secondary education, and University Students as a

¹²⁶Linda Mirin and Arthur Stinchcombe, "The Political Mobilization of Mexican Peasants", a paper presented to the annual meeting of the American Sociological Association, in Montreal, September 1964, pp. 12-15.

¹²⁷Peter P. Lord., op. cit., p. 47.

percentage of population, as indicators of political recruitment, is based on several assumptions. The first is that higher education tends to produce individuals who are likely to follow election campaigns, who feel themselves capable of influencing government decisions, and who subsequently will become involved in the political process through interest groups and political parties. Certainly the high degree of politicization of Latin American universities is well known. Alistair Hennessy quite aptly remarks,

Some universities are so politics ridden that they may justly be described as political rather than academic institutions.¹²⁸

It is also assumed that university students and those who have better than secondary education constitute the base from which the technical, professional, governmental and business elites are recruited. Finally it is assumed that since many surveys show that political tolerance, support for civil liberties, and opposition to authoritarian political leaders and groups tend to increase with education,¹²⁹ the degree of equality of land distribution should

¹²⁸Alistair Hennessy, "University Students in National Politics", in The Politics of Conformity in Latin America, Claudio Veliz (ed.), op. cit., p. 119.

¹²⁹Seymour M. Lipset, Political Man, Doubleday & Co., New York, 1960, pp. 55-60; Gabriel A. Almond & Sidney Verba, The Civic Culture, Princeton University Press, Princeton, N.J., 1963, pp. 379-387; William Kornhauser, The Politics of Mass Society, Routledge and Kegan Paul, London, 1960, p. 69.

show a high positive correlation with the above-mentioned indicators.

The resulting correlation coefficients (.66 and .60 respectively) while showing some association, are far from significant. In attempting to ascertain the factors accounting for this relatively low association, several cultural and sociological characteristics of Latin America in general are salient which may help in explaining the recruitment process in the six countries.

Alistair Hennessy points out that student political action is mostly directed against university authorities over university matters, rather than having broader political implications, and that organizationally, students have shown much greater solidarity when acting qua students than as supporters of any particular political viewpoint.¹³⁰ Hennessy's explanation of these attitudes is that the majority of students come from the middle class, with an increasingly large number being drawn from the lower end of this category. He argues that,

Those from the lower group are aspirants to professional middle class standing and see a university career putting the seal on their social advancement. For them the university fulfills a social mobility function and is the path to status and hence security. For those from the established middle class . . . the university primarily has a status-preservation function . . . ¹³¹

¹³⁰Alistair Hennessy, op. cit., p. 135.

¹³¹Ibid., p. 137.

This view is substantiated in an extensive study done by Kenneth N. Walker on political attitudes in various Latin American universities. He concludes that,

In general, it may be asserted that students tend to reflect the political culture of their society, while active engagement in university politics plays an especially important role in the process of political socialization. But the consequences of political activity for political socialization depend upon characteristics of the environment, so that political activity appears to enhance acceptance of the norms and commitment to the values of a democratic culture only where such a culture exists both in the university and the larger society.¹³²

These observations would suggest that the assumption regarding the tendency on the part of the highly educated to be more politically tolerant does not hold for Latin America. While the negation of this assumption is by no means completely substantiated, it is interesting to note that the assumption was based on research done in the United States and Great Britain. Further research into this subject would be of great value, since additional support of the views of Hennessy and Walker, would undermine many of the generalizations made of Latin America based on North American and European research.

A tentative conclusion based on the above observations must be that while the recruitment process is indeed

¹³²Kenneth N. Walker, "Political Socialization in Universities", in Elites in Latin America, Seymour Martin Lipset and Aldo Solari (eds.), Oxford University Press, New York, 1967, p. 428.

associated with higher education, the relationship with the distribution of land is not at all clear. It would seem that most highly educated people, once they have completed their formal education, support the political position of the status quo.

Urban middle class as a percentage of total urban population, as an indicator of recruitment, is closely tied to the previous two indicators, since as Hennessy pointed out, the majority of university students come from the middle class,¹³³ and tend to be more concerned with the preservation of their status than with reform of the political system. Luis Ratinoff, writing of the urban middle class in Latin America, supports this thesis, and adds that while the middle class political movements originally enlist the support of labour groups, they are concerned primarily with urban rather than rural problems, and tend to promote their own welfare above everything else.¹³⁴

For these reasons the correlation between this indicator and the degree of land distribution displays much the same results (.70) as the previous two correlations, and the conclusions which can be drawn are also

¹³³Hennessy, op. cit., p. 137.

¹³⁴Luis Ratinoff, "The New Urban Groups: The Middle Classes", in Elites in Latin America, S.M. Lipset and A. Solari, op. cit., p. 70.

similar -- that while the urban middle class is a primary source of new political leaders, they are not concerned with drastic changes such as land reform.

Interest Aggregation and Articulation

Organized labour as a percentage of the total labour force was chosen as an indicator of interest aggregation and articulation primarily because of the writings of Robert J. Alexander, who stated that,

Organized labor in Latin America has had an essentially revolutionary role . . . (it is) part of the movement for basic economic, social and political change, and has represented a group which was seeking a larger role in the general life of the community.¹³⁵

In another article dealing with the role of the Latin American labour leaders, Alexander emphasizes the idea that the Latin American labour movement, unlike that of North America, is highly political and concerned not only with the betterment of conditions for the union members, but for society as a whole.¹³⁶ Because of these observations, and since Alexander's work on organized labour in Latin America is the main source of information on this subject, it was felt

¹³⁵ Robert J. Alexander, Organized Labor in Latin America, The Free Press of Glencoe, New York, 1965, p. 12.

¹³⁶ _____, "The Latin American Labor Leader", in Industrial Relations and Social Change in Latin America, University of Florida Press, Gainesville, 1965, p. 72.

that in countries with a relatively high percentage of organized labour, a strong pressure group would exist which would support land reform legislation.

The resulting correlation is however extremely weak, showing a coefficient of .26. Part of the reason for this insignificant result may lie in the nature of the labour movements of the six countries being studied. Torcuato Di Tella, in a study of the working class in Latin America, and their political relations, creates a typology of Latin American countries according to seven types of working-class organizations. According to this typology, Colombia, Ecuador and Paraguay have little industrial concentration while Peru and Bolivia have industrial working-class concentrations primarily in isolated areas remote from the main urban centers. Mexico is the only country of the six that has significant amounts of organized urban industrial workers. It could be expected therefore, that with the exception of Mexico, organized labour in the six countries would be either too weak, or too far away from the centers of government to exert much political pressure.

A second possible explanation of this low correlation, is the relationship of labour to government. In most cases, the government constitutes a major, if not the most important external influence on trade union organization

and activities.¹³⁷ Mexico furnishes a notable example of this. Labour was organized primarily by the government, prospered under friendly government supervision, and at the same time provided the ruling regime with its principal organizational strength.¹³⁸ Under these circumstances it can be understood that organized labour could not effectively influence government agrarian policies.

A third possible explanation of the low correlation between organized labour and land distribution is suggested by Henry A. Landsberger who disputes Alexander's concept of a revolutionary labour movement in Latin America. He suggests that labour's goals are: "short-range, limited, economic, and not primarily the total reconstruction of society."¹³⁹ His "evidence" for this statement is,

the relative infrequency with which one encounters today, as compared with the past, the existence of separate trade union federations, each explicitly established in accordance with some socio-political doctrine, generally of a revolutionary nature.¹⁴⁰

¹³⁷ M.P. Troncoso and Ben G. Burnett, The Rise of the Latin American Labor Union, op. cit., p. 150.

¹³⁸ See: L. Vincent Padgett, the Mexican Political System, op. cit., pp. 91-109; Frank R. Brandenburg, The Making of Modern Mexico, op. cit., pp. 242-247.

¹³⁹ Henry A. Landsberger, "The Labor Elite: Is it Revolutionary?" in S.M. Lipset and A. Solari, Elites in Latin America, op. cit., p. 264.

¹⁴⁰ Ibid., p. 265.

Based on the above observations, in conjunction with the results of the statistical test, it would seem that for the six countries, the incidence of trade union organizations has little impact on the distribution of land.

The final indicator of interest aggregation and articulation is the percentage of population that is literate. This indicator also shows very little correlation with the distribution of land (.25). While it would seem almost axiomatic that a literate population would be more aware of political activities and subsequently more interested in articulating their views,¹⁴¹ the low association between this variable and land distribution is in all likelihood a function of the different educational opportunities found in urban and rural areas. As was stated in a previous section of this paper, very little data showing this variance is available, however an isolated example taken from the International Labour Review will indicate the significance of this variation.

¹⁴¹Neale J. Pearson, writing of "Latin American Peasant Groups and the Modernization Process", in the Journal of International Affairs, Vol. 20, No. 2, 1966, sees the presence of a literate peasant population as being a major factor affecting the success of peasant pressure groups. He says, "It seems unquestionable for example, that the success of peasant pressure groups in southern Brazil and Argentina is in part due to the ability of peasants to read and write. Literacy makes them less dependent on non-peasants for the articulation and defence of their interests. (p. 315).

In Colombia two thirds of the schools do not teach more than half of the complete primary syllabus. The difference between urban areas and rural areas is enormous: in Colombia again, 48% of schools in urban areas and only 1.2% in rural areas offer the full syllabus. In Mexico the percentages are 77.6 and 3.2 respectively.¹⁴²

Many other studies mention this difference,¹⁴³ and when complete statistical data are gathered, the relationship between rural literacy rates and land distribution will undoubtedly become more meaningful.

Conclusion

In many respects, any general reform in land tenure has revolutionary aspects about it, and in its initial stages at least, such reform has been no primarily economic, but social and political. This is almost axiomatic because land tenure reform involves not only the exchange of property rights, but also the shifting of political and social positions, and eventually the rise of new power groups in the political structure.

Because of these revolutionary aspects, and the tendency on the part of most strata of Latin American society to maintain and reinforce the status quo, the

¹⁴²International Labour Review, Vol. 90, 1964, "Youth and Work in Latin America", p. 19.

¹⁴³Alexander L. Peaslee, "Education's Role in Development", Economic Development and Cultural Change, Vol. 17, No. 3, April 1969; W. Raymond Duncan, op. cit., pp. 187-210.

implementation of land reform legislation has been very slow. Two means by which this barrier can be broken have been suggested. First, is simply a revolution which must originate in the peasantry itself. Second is Hirschman's thesis that conflicts will arise within the power group structure and that eventually the rural landowners will lose their place within this structure. The real test of Hirschman's optimistic thesis is the degree to which effective agrarian reform programmes have been carried out to date. Using this criterion, it would seem that the large landowners have been relatively successful in defending their interests. As Hirschman himself points out, politicians, confident that nothing of importance is going to change, often vote in favour of socially advanced laws which turn out to be inoperative because of lack of enforcement or clever obstructions.¹⁴⁴

Since the Gini ratios of land distribution which have been used in this study date back to the early 1950's, and are the only ones available, and since data showing the amount of land distributed in the last twenty years are also not available in most cases, evaluation of the land reform programmes must rely upon descriptive studies

¹⁴⁴Hirschman, op. cit., pp. 156-157.

done by United Nation agencies and various scholars.¹⁴⁵

Based on these sources, the following conclusions can be drawn. (1) Mexico has consistently maintained a programme of land distribution which, from the years 1953 to 1963 distributed approximately 20 million hectares of land (12% of total agricultural holdings). Farm credit is available to ejidos and small farmers and the agrarian reform act contains no major barriers to the implementation of the act.

¹⁴⁵Mexico: Frank R. Brandenburg, op. cit., p. 254; Eyler N. Simpson, The Ejido: Mexico's Way Out, University of North Carolina Press, Chapel Hill, 1937; Carlos Tello, La Tenencia De La Tierra En Mexico, University of Mexico Press, Mexico City, 1968; Frank Tannenbaum, The Mexican Agrarian Revolution, Archon Books, 1968; Bolivia: Claudio Veliz, Latin America, op. cit., p. 34; Rainer Schikele, Agrarian Revolution and Economic Progress, Frederick A. Praeger, New York, 1968; R.J. Alexander, The Bolivian National Revolution, Rutgers University Press, New Brunswick, 1958; D.B. Heath, "Land Reform in Bolivia", Inter-American Economic Affairs, Vol. 12, No. 4, 1958-59; Alexander T. Edelman, Latin American Government and Politics, The Dorsey Press, Homewood, Illinois, 1965, p. 241; Colombia: Dale W. Adams, Colombia's Land Tenure System: Antecedents and Problems, Land Tenure Center, University of Wisconsin, Madison, 1966; Department of Economic and Social Affairs, Progress in Land Reform, Fourth report, United Nations, New York, 1966, pp. 7-11; Claudio Veliz, Latin America, op. cit., pp. 80-84; Peru: Claudio Veliz, Latin America, op. cit., pp. 117-120; Progress in Land Reform; Fourth Report, op. cit.; Ecuador: J.V.D. Saunders, "Man-Land Relations in Ecuador", Rural Sociology, Nov. 1959; Claudio Veliz, Latin America, op. cit., pp. 99-100; Progress in Land Reform: Fourth Report, op. cit., pp. 12-17; Paraguay: Claudio Veliz, Latin America, op. cit., p. 106; Progress in Land Reform: Fourth Report, op. cit., pp. 12-17.

(2) Bolivia, since the revolution of 1952, has distributed over 4 million hectares of land up to and including 1962. No figures are available past 1962 but, given the reactionary nature of the present government, it is doubtful whether much more land has been distributed. Because of the militancy of the peasants after the revolution, land reforms had to be implemented very rapidly, in fact, in many cases the armed peasants merely seized the land themselves. This resulted in extreme parcelization of the land in certain areas and combined with a lack of government assistance, explains the consistently poor performance of Bolivia, particularly in the economic sector. Nevertheless, because of the land reform which has taken place, political development, particularly among the peasants, has been rapid.

(3) Changes in Colombia's land tenure system has accelerated since the uprisings in the 1948 to 1950 period, and culminated in the land reform act of 1961. Land division through inheritance, cash rental arrangements, and land division through sales, increased in many parts of Colombia. In some parts of the country such as Narino, Boyaca and the north coast, land occupatants are still obliged to give days of work to the hacienda for the use of the land. This practice however, is rapidly disappearing. Actual implementation of the land reform legislation is proceeding very slowly. The department of Economic and

Social Affairs of the United Nations, estimates that 1,450 families have actually been distributed land as of the end of 1964. Since colonization into the coastal areas and eastern regions of Colombia has been encouraged, it is difficult to estimate how many families received former hacienda land and how many opened up new land.

(4) Peru passed a land reform act in 1964 which, because of strong congressional opposition was considerably weaker than the legislation originally proposed. It afforded protection against redistribution to the coastal estates which were relatively efficient but pledged distribution of sierra land so as to benefit Indian communities. Much of the legislation was worded so that it would be difficult both to interpret and to implement. Two projects were begun in 1965 which, it was said, would ultimately settle 30,000 families. To date, however, these projects show little sign of actual implementation.

(5) Ecuador also passed a land reform bill in 1964 and since that date, approximately 7,000 hectares of land have been distributed. The emphasis however has been on distributing formerly unoccupied land for colonization and breaking up the state-owned estates. It has become illegal not to pay farm workers (as was common under the huasipungo system), but the reforms have not fundamentally changed the agrarian structure in the face of strong and articulate opposition.

(6) The Paraguayan Agrarian Statute -- Act was passed in 1963 but because of its evasive wording and broad limitations (allowing maximum holdings of 20,000 hectares), had little effect on the peasant population. In eastern Paraguay a programme of land distribution was begun but this was closely connected with road construction and merely made available new lands for colonization by landless peasants.

It can be seen from the above descriptions that except in Mexico and Bolivia, the two countries where actual revolutions have occurred, land distribution implementation has been relatively ineffective. It must therefore be concluded on the basis of this admittedly skimpy evidence, and the results of this study, that a gradual evolution towards a solution of the land distribution problem is either unlikely, or will take so long that violent peasant reaction can be expected. Strongly organized congressional and interest group opposition to any attempt to speed up land reform, indicates that the present dominant groups still maintain a high degree of cooperation amongst each other. It would therefore seem that only by an actual revolution, where the landowner class is eliminated, and other supporting groups severely restricted, can land reform actually take place.

It can also be concluded that the association between land distribution and political development is

significant in the rural areas but that because of the dualistic nature of all six countries, land distribution has little political effect in the urban -- industrial areas.

CONCLUSION

This paper has attempted to show that land reform is a necessary condition for development in the six Latin American countries being studied. It was originally argued that the primary effect of land distribution was not higher economic efficiency, but a change in social status and class structure which ultimately would result in greater involvement of the polity in the political and economic systems.

Analysis of the economic data showed several results which could be considered highly significant. It was established that the distribution of land was highly correlated with the distribution of income, particularly in rural areas. The importance of this finding, and its effects on political and economic development was stressed. It was pointed out that maldistribution of income created structural barriers to development which encompassed all facets of the economic sector including the productivity of the domestic agriculture sector, consumer price stability, and domestic purchasing power. It was further shown that structural economic change, as measured by changes in urban and industrial indicators, were highly associated with the

distribution of land, and that in general, the relationship of land distribution to economic development was more than originally anticipated.

The relationship of land distribution to political development was also shown to be quite significant in many areas. Integration of the rural sector into the national society was hampered by skewed land distribution patterns which, it was shown, are highly associated with the perpetuation of the Indian way of life. The positive correlation of the transportation indicators with land distribution also showed that this relationship contributed to a lack of integration of the society.

The study clearly indicated that institutionalization was also highly associated with the distribution of land and that the dominant position of the military and rural elites in government were particularly closely associated with land distribution. Stability was also found to be highly associated with the independent variable (land distribution), suggesting that skewed land distribution was associated with certain pressures within society which were manifested in military interventions and the necessity to maintain large armed forces.

Finally, it was shown that the degree to which the polity participated in political affairs was highly associated with land distribution, although the involvement of the people seemed restricted to participation during

election periods. Analysis of recruitment, interest aggregation and interest articulation indicators suggested that these functions remained the property of the middle and upper classes.

In generalizing the results of the investigation, it can be said that the main hypothesis, suggesting that the maldistribution of land contributes to the rigidification of the Latin American society, has been supported. The study also shows that little progress toward equity has been made in those countries which have not experienced a sustained social revolution, and it is suggested that a high degree of development cannot take place without eliminating the dominant position of at least the rural elite.

Directions for Future Research

As was pointed out throughout the paper, a high degree of unequal land distribution undoubtedly acts as a barrier to development, particularly in rural areas, but obviously other factors must also be taken into consideration. By drawing up a matrix in which the twenty three indicators of political development are correlated with each other, the more significant variables become evident. The matrix also provided evidence that certain correlations might be the result of two variables acting upon a third, rather than each variable being mutually exclusive, suggesting that because the Spearman coefficient cannot be generalized to a partial correlation coefficient, other tests

should be used.

Examination of the matrix, noting that the statistically significant coefficients are indicated with a dot, (at the .05 level -- .83 or better for those with an N of 6, .90 or better for those with an N of 5) suggests the areas which warrant further study.

It has been previously noted that the word 'Indian' in the social context of these six countries, carried the connotation of a socially distinct group rather than a group distinguished on the basis of ethnicity or race. For this reason the indicator (number 1) was ranked from least to most, that is, the country with the smallest percentage of Indians was ranked number one. The matrix coefficients therefore show that the percentage of Indians in the population is inversely related to both the percentage of people living in large urban areas (indicator number 5) and to the percentage of people holding higher level occupations (indicator number 7). It must be pointed out that the latter two indicators show a high degree of correlation with each other, nevertheless, it is clear that as a large, socially distinct group residing primarily in rural areas, and occupying the lower social and occupational positions, the Indians are representative of the dualistic nature of Latin American society and as such, their integration is a major factor in Latin American development.

Recognition of this factor suggests that a closer examination of the effects of various social, political and economic phenomena on the Indian sub-group could be rewarding. Data specifically concerning this group (which is presently not available) would enable comparisons with other national groups to be made, and in this way viable developmental techniques could be formulated.

A second area of potential interest as delineated by the matrix coefficients is the relationship between the military and the length of government tenure. It can be seen that "years of constitutional government" (indicator 13) is perfectly, positively correlated with "expenditures on defense as a percent of total expenditures" (indicator 12).

If the latter indicator is accepted as a measurement of the relative influence of the military elite in governmental affairs, the matrix coefficient suggests that longevity of government tenure and the degree to which the military elite attain this influence, are perfectly associated. Conversely, this would suggest that changes in government, which in Latin America include a great number of military coups, must be associated with a lessening of military influence and subsequent dissatisfaction of this element of the dominant group structure.

This thesis, which argues that military interventions are an inverse function of the degree to which governments

cater to the interests of the military elite, has not received much support in the relevant literature.¹⁴⁶

Robert Putnam, in attempting to empirically test the validity of the major theories of military intervention in politics, concludes that,

Social mobilization definitely inhibits military intervention in politics. . . . The direct effect of economic development seems to be to encourage military intervention, although there is also a strong indirect effect linking economic development and military ab-
sention by way of social mobilization.¹⁴⁷

Interestingly enough, Putnam also finds a high degree of positive correlation between military intervention and the internal characteristics of the military (for which he uses the same indicator as this study), but attributes this positive relationship as "probably the result of circular causation".¹⁴⁸

Since the statistical tests used in this study cannot be used to establish the direction of the relationship between military influence on government and military interventions (or any other relationship), and since Mr. Putnam's explanation of this phenomenon cannot merely be accepted at face value, further investigation of the validity

¹⁴⁶See Robert D. Putnam, "Toward Explaining Military Intervention in Latin American Politics", World Politics, Vol. 20, No. 1, October, 1967, where the most prominent theories relevant to this question are delineated and discussed.

¹⁴⁷Ibid., p. 97.

¹⁴⁸Ibid., p. 100.

of the posited thesis is certainly warranted, and given the frequency of military interventions in Latin America, must certainly be considered as high on the list of topics of study in Latin American politics.

BIBLIOGRAPHY

Books

- Adams, Dale W. Colombia's Land Tenure System: Antecedents and Problems, Land Tenure Center, University of Wisconsin, Madison, 1966.
- Agarwala, A.M. and Singh, S.P. (eds.) The Economics of Under-Development, Oxford University Press, London, 1968.
- Alexander, Robert J. The Bolivian National Revolution, Rutgers University Press, New Brunswick, 1958.
- _____. The Latin American Labor Leader, University of Florida Press, Gainesville, 1965.
- _____. Organized Labor in Latin America, The Free Press of Glencoe, New York, 1965.
- Almond, Gabriel A. and Powell, Bingham Jr. Comparative Politics, Little Brown and Company, Boston, 1966.
- _____. and Coleman, James S. (eds.) The Politics of the Developing Areas, Princeton University Press, Princeton, 1960.
- _____. and Verba, Sidney. The Civic Culture, Princeton University Press, Princeton, 1963.
- Anderson, Charles W., Von der Mehden, Fred R., and Young, Crawford. Issues of Political Development, Prentice-Hall Inc., New Jersey, 1967.
- _____. Politics and Economic Change in Latin America, D. Van Nostrand Company Inc., Princeton, N.J., 1967.
- Andreski, Stanislav. Parasitism and Subversion, Weidenfeld and Nicolson, London, 1966.
- Apter, David E. Some Conceptual Approaches to the Study of Modernization, Prentice-Hall Inc., Englewood, N.J., 1968.
- Aron, Raymond. The Industrial Society, Simon and Schuster, New York, 1967.

- Bailey, Norman A. Latin America in World Politics, Walker and Company, New York, 1967.
- Barracclough, Solon and Domike, Arthur. Agrarian Structure in Seven Latin American Countries, Land Tenure Center, University of Wisconsin, Madison, 1966.
- Brandenburg, Frank R. The Making of Modern Mexico, Prentice-Hall Inc., Englewood Cliffs, N.J., 1964.
- Clark, M.R. Organized Labor in Mexico, University of North Carolina Press, Chapel Hill, 1934.
- Cole, J.P. Latin America: An Economic and Social Geography, Butterworth Co., London, 1965.
- Cumberland, Charles C. (ed.) The Meaning of the Mexican Revolution, D.C. Heath and Company, Boston, 1967.
- De Gregori, Thomas R. and Pi-Sunyer, Oriol. Economic Development: The Cultural Context, John Wiley and Sons Inc., New York, 1969.
- Deutsch, Karl W. and Foltz, William J. Nation-Building, Atherton Press, New York, 1966.
- Deutschmann, Paul J. and McNelly, John T. Ellingsworth, Huber. Communication and Social Change in Latin America, Frederick A. Praeger, New York, 1968.
- Dorner, Peter. The Influence of Land Tenure Institutions on the Economic Development of Agriculture in Less Developed Countries, Land Tenure Center, University of Wisconsin, Madison, 1968.
- Edelman, Alexander T. Latin American Government and Politics, The Dorsey Press, Homewood, Illinois, 1965.
- Einaudi, Luigi. Changing Contexts of Revolution in Latin America, Rand Corporation, Santa Monica, 1966.
- Ellis, Howard S. (ed.) Economic Development for Latin America, MacMillan and Co. Ltd., London, 1961.
- Emerson, Rupert. From Empire to Nation, Beacon Press, Boston, 1960.
- Foster, George M. Traditional Cultures: and the Impact of Technological Change, Harper Brothers, New York, 1962.

- Froehlick, Walter. Land Tenure, Industrialization and Social Stability, Marquette University Press, Milwaukee, 1961.
- Furtado, Celso. The Economic Growth of Brazil, University of California Press, Berkeley, 1965.
- Gadalla, Saad M. Land Reform in Relation to Social Development: Egypt, University of Missouri Press, Columbia, 1962.
- Hagen, Everett. The Economics of Development, Richard D. Irwin Inc., Homewood, Illinois, 1968.
- _____. On the Theory of Social Change, The Dorsey Press Inc., Homewood, Illinois, 1962.
- Hanson, Simon G. Economic Development in Latin America, The Inter-American Press, Washington, 1951.
- Hirschman, Albert O. Journeys Toward Progress -- Studies of Economic Policy-Making in Latin America, Twentieth Century Fund, New York, 1963.
- _____. Latin American Issues, Twentieth Century Fund., New York, 1961.
- Holt, Robert and Turner, John. The Political Basis of Economic Development, D. Van Nostrand Co., Toronto, 1966.
- Hoselitz, Bert F. (ed.) The Progress of Underdeveloped Areas, University of Chicago Press, Chicago, 1952.
- _____. Sociological Aspects of Economic Growth, The Free Press of Glencoe, New York, 1960.
- _____. Agrarian Societies in Transition, The Annals of the American Academy of Political and Social Science, Vol. 305, May 1956, Philadelphia, 1956.
- Huntington, Samuel P. Political Order in Changing Societies, Yale University Press, New Haven, 1968.
- Johnson, Chalmers. Revolution and the Social System, Stanford University Press, Stanford, 1964.
- Kindleberger, Charles P. Economic Development, McGraw-Hill Book Company, New York, 1965.

- Kornhauser, William. The Politics of Mass Society, Routledge and Kegan Paul, London, 1960.
- Lambert, Jacques. Latin America: Social Structures and Political Institutions, University of California Press, Berkeley, 1967.
- Lieuwen, Edwin. Generals VS Presidents, Frederick A. Praeger, New York, 1964.
- _____. Arms and Politics in Latin America, Frederick A. Praeger, New York, 1960.
- Lipset, Seymour Martin. Political Man, Doubleday and Company, New York, 1960.
- _____, and Solari, A. (eds.) Elites in Latin America, Oxford University Press, New York, 1967.
- Martz, John D. The Dynamics of Change in Latin American Politics, Prentice-Hall Inc., New Jersey, 1965.
- McClelland, David C. and Winter, David G. Motivating Economic Achievement, The Free Press of Glencoe, New York, 1969.
- _____. The Achieving Society, D. Van Nostrand Co., Princeton, 1961.
- Myrdal, Gunnar. Rich Lands and Poor, Harper and Brothers, Publishers, New York, 1957.
- Needler, Martin C. Political Systems of Latin America, D. Van Nostrand Company, Princeton, 1964.
- _____. Political Development in Latin America, Randon House, New York, 1968.
- Padgett, L. Vincent. The Mexican Political System, Houghton Mifflin Co., Boston, 1966.
- Parson, K.H., Penn, R.J., and Raup, P.M. (eds.) Land Tenure, University of Wisconsin Press, Madison, 1956.
- Pearson, Lester B. Partners in Development, Praeger Publishers, New York, 1969.
- Powelson, John P. Latin America, McGraw Hill Company, New York, 1964.

Pye, Lucian W. Communications and Political Development, Princeton University Press, Princeton, 1963.

_____. Aspects of Political Development, Little Brown and Company, Boston, 1966.

_____, and Verba, Sidney (eds.) Political Culture and Political Development, Princeton University Press, Princeton, 1965.

Ritvo, Herbert. The New Soviet Society, The New Leader Press, New York, 1962.

Russett, Bruce M., et. al. World Handbook of Political and Social Indicators, Yale University Press, New Haven, 1964.

Russett, Bruce M. Trends in World Politics, MacMillan Company, New York, 1965.

Rycroft, Stanley W. and Clemmer, Myrtle M. A Study of Urbanization in Latin America, Commission on Ecumenical Mission and Relations, New York, 1963.

Schikele, Rainer. Agrarian Revolution and Economic Progress, Frederick A. Praeger, New York, 1968.

Schmitt, K.M. and Burks, D.D. Evolution or Chaos, Frederick A. Praeger, New York, 1963.

Senior, Clarence. Land Reform and Democracy, University of Florida Press, Gainesville, 1958.

Silvert, Kalman H. The Conflict Society, American Universities Field Staff Inc., New York, 1966.

Simpson, Eyler N. The Ejido: Mexico's Way Out, University of North Carolina Press, Chapel Hill, 1937.

Smith, T. Lynn (ed.) Agrarian Reform in Latin America, Alfred A. Knopf, New York, 1965.

Southworth, H.M. and Johnson, B.F. (eds.) Agricultural Development and Economic Growth, Cornell University Press, Ithaca, 1967.

Szulc, Tad. Winds of Revolution, Frederick A. Praeger, New York, 1963.

Tannenbaum, Frank. The Mexican Agrarian Revolution, Archon Books, New York, 1968.

- Tello, Carlos. La Tenancia De La Tierra En Mexico, University of Mexico Press, Mexico City, 1968.
- TePaske, J.J. (ed.) Explosive Forces in Latin America, Ohio State University Press, 1964.
- Thiesenhusen, William and Brown, Marion. Survey of the Alliance for Progress, Land Tenure Center, University of Wisconsin, Madison, 1967.
- Troncosa, M.P. and Burnett, B.G. The Rise of the Latin American Labor Movement, College and University Press, New Haven, 1960.
- Urquida, Victor L. The Challenge of Development in Latin America, Pall Mall Press, London, 1964.
- Veliz, Claudio (ed.) Obstacles to Change in Latin America, Oxford University Press, London, 1965.
- _____. (ed.) The Politics of Conformity in Latin America, Oxford University Press, London, 1967.
- _____. (ed.) Latin America, Frederick A. Praeger, New York, 1968.
- Wagley, Charles. An Introduction to Brazil, Columbia University Press, New York, 1963.
- Weiner, Myron (ed.) Modernization, Basic Books Inc., New York, 1966.
- Welch, Claude E. (ed.) Political Modernization, Wadsworth Publishing Co., Belmont, California, 1967.
- Whetten, Nathan L. Rural Mexico, University of Chicago Press, Chicago, 1948.
- Wilber, Charles K. The Soviet Model and Underdeveloped Countries, University of North Carolina Press, Chapel Hill, 1969.
- Wilgus, Curtis (ed.) The Caribbean: Mexico Today, University of Florida Press, Gainesville, 1964.
- Winnie, William W. Jr. Latin American Development, Latin American Center, University of California, Los Angeles, 1967.
- Zondag, Cornelius. The Bolivian Economy, Frederick A. Praeger, New York, 1966.

Articles

- Adams, Dale W. and Havens, Eugene. "The Use of Socio-Economic Research in Developing a Strategy of Change in Rural Communities: A Colombian Example", Economic Development and Cultural Change, Vol. 14, No. 2, January 1966.
- _____ and Montero, Eduardo L. "Land Parcelization in Agrarian Reform: A Colombian Example", Inter-American Economic Affairs, Vol. 19, No. 3, Winter 1965.
- Alexander, Robert J. "Agrarian Reform in Latin America", The Journal of Economic History, Vol. 23, December 1963.
- Anderson, Charles W. "Toward a Theory of Latin American Politics", Western Political Quarterly, Vol. 15, September 1965.
- _____. "Political Factors in Latin American Economic Development", Journal of International Affairs, Vol. 20, 1966.
- Barlowe, Ralph. "Land Reform and Economic Development" Journal of Farm Economics, Vol. 35, 1953.
- Boulding, Kenneth. "The Relations of Economic, Political and Social Systems", Social and Economic Studies, December 1962.
- Branco, Raul. "Land Reform -- The Answer to Latin American Agricultural Development", Journal of Inter-American Studies, Vol. 9, No. 2, April 1967.
- Clark, Ronald James. "Land Reform and Peasant Market Participation on the North Highlands of Bolivia", Land Economics, Vol. 44, 1968.
- Cook, Hugh L. "The New Agrarian Reform Law and Economic Development in Venezuela", Land Economics, Vol. 37, 1961.
- Cutright, Phillips. "National Political Development: Measurement and Analysis", American Sociological Review, April 1963.
- Deutsch, Karl W. "Social Mobilization and Political Development", American Political Science Review, September 1961.

- Deutschmann, Paul J. and McNelly, John T. "Characteristics of Latin American Countries", Vol. 8, September 1964, American Behavioral Scientist.
- Deutschmann, Paul J., McNelly, John T. and Ellingsworth, H. "Mass Media Use by Sub Elites in Eleven Latin American Countries", Journalism Quarterly, Autumn, 1961.
- Dorner, Peter. "Land Tenure, Income Distribution and Productivity Interactions", Land Economics, Vol. 40, 1964.
- Duff, Ernest A. and McCamant, John F. "Measuring Social and Political Requirements for System Stability in Latin America", American Political Science Review, December 1968.
- Duncan, W. Raymond. "Education and Political Development: The Latin American Case", The Journal of Developing Areas, January 1968.
- Dye, Thomas R. "Income Inequality and American State Politics", American Political Science Review, Vol. 63, March 1969.
- Eisenstadt, S.N. "The Need for Achievement", Economic Development and Cultural Change, Vol. 11, 1962.
- Feierabend, Ivo K. and Rosalind L. "Aggressive Behaviors within Politics, 1948-1962: A Cross National Study", Journal of Conflict Resolution, September 1966, Vol. 10, No. 3.
- Fitzgibbon, Russell H. and Johnson, Kenneth F. "Measurement of Latin American Political Change", American Political Science Review, Vol. 55, No. 3, September 1961.
- Frankenhoff, Charles A. "The Prebisch Thesis: A Theory of Industrialization for Latin America", Journal of Inter-American Studies, April 1962.
- Glade, William. "Social Backwardness, Social Reform and Productivity in Latin America", Inter-American Economic Affairs, No. 3, Winter 1961.
- Gordon, H. Scott. "Ideas of Economic Justice", Daedalus, Summer, 1963.
- Haar, Charles M. "Latin America's Troubled Cities", Foreign Affairs, Vol. 41, No. 3, April 1963.

- Heath, D.B. "Land Reform in Bolivia", Inter-American Economic Affairs, Vol. 12, No. 4, 1958-59.
- Heilbroner, R.L. "Counterrevolutionary America", Commentary, April 1967.
- Huizer, Gerrit. "Peasant Organization in the Process of Agrarian Reform in Mexico", Studies in Comparative International Development, Vol. 4, 1968.
- Johnson, V. Webster. "Significance of Landownership in Land Reform", Land Economics, Vol. 42, 1966.
- _____ and Kristjanson, Baldur. "Programming for Land Reform in the Developing Agricultural Countries of Latin America", Land Economics, Vol. 40, 1964.
- Johnson, Bruce F. and Mellor, John W. "The Role of Agriculture in Economic Development", American Economic Review, Vol. 51, September 1961.
- Kahl, Joseph A. "Urbanizacao E. Mundancas Ocupacionais No Brasil", America Latina, No. 4, 1962.
- _____. "Social Stratification and Values in Metropoli and Provinces: Brazil and Mexico", America Latina, Vol. 8, No. 1, 1965.
- Kling, Merle. "Toward a Theory of Power and Political Instability in Latin America", Western Political Quarterly, Vol. 9, No. 1, March 1956.
- Lodge, G.C. "Revolution in Latin America", Foreign Affairs, January 1966.
- Long, Erven J. "The Economic Basis of Land Reform in Underdeveloped Economies", Land Economics, Vol. 37, 1961.
- Maddox, James G. "Economic Growth and Revolution in Mexico", Land Economics, Vol. 36, 1960.
- Metraux, Alfred. "The Social and Economic Structures of the Indian Communities of the Andean Region", International Labour Review, March 1959.
- Midlarsky, Manus and Tanter, Raymond. "A Theory of Revolution", Journal of Conflict Resolution, September 1967, Vol. 11, No. 3.
- _____. "Toward a Theory of Political Instability in Latin America", Journal of Peace Research, March 1967.

- Myrdal, G. "The United Nations, Agriculture and the World Economic Revolution", Journal of Farm Economics, Vol. 47, No. 4, November 1965.
- Needler, Martin C. "The Political Development of Mexico", American Political Science Review, Vol. 55, 1961.
- _____. "Political Development and Military Intervention in Latin America", American Political Science Review, September 1966.
- Owen, W.F. "The Double Developmental Squeeze on Agriculture", American Economic Review, March 1966.
- Pearson, Neale H. "Latin American Peasant Pressure Groups and the Modernization Process", Journal of International Affairs, Vol. 20, 1966.
- Peaslee, Alexander L. "Education's Role in Development", Economic Development and Cultural Change, Vol. 17, No. 3, April 1969.
- Phillips, Walter. "Technological Levels and Labor Resistance to Change in the Course of Industrialization", Economic Development and Cultural Change, Vol. 11, 1962.
- Putnam, D. "Towards Explaining Military Intervention in Latin American Politics", World Politics, October 1967.
- Russett, Bruce M. "Inequality and Stability -- The Relation of Land Tenure to Politics", World Politics, April 1964, Vol. 16.
- Saunders, J.V.D. "Mand-Land Relations in Ecuador", Rural Sociology, November 1959.
- Silvert, Kalman. "Leadership Formation and Modernization in Latin America", Journal of International Affairs, Vol. 20, 1966.
- Stewart, Charles T. Jr. "Land and Income Distribution in Peasant Countries", Land Economics, Vol. 37, 1961.
- Stokes, William S. "Violence as a Power Factor in Latin American Politics", Western Political Quarterly, Vol. 5, No. 3, September 1952.
- Tuma, Elias H. "The Agrarian-Based Development Policy in Land Reform", Land Economics, Vol. 39, 1963.

Wolf, Charles Jr. "The Political Effects of Economic Programs: Some Indications from Latin America", Economic Development and Cultural Change, October 1965.

Wunderlich, Gene. "Concentration of Land Ownership", Journal of Farm Economics, Vol. 40, Part 2, 1958.

Wyckoff, Theodore. "The Role of the Military in Latin American Politics", Western Political Quarterly, Vol. 13, No. 3, September 1960.

Whyte, W.F. and Holmber, A.R. "Human Problems of U.S. Enterprise in Latin America: The Cornell -- Peru Project", Human Organization, Vol. 15, 1956.

Unpublished Papers

Barraclough, Solon. "Agrarian Structure and Education in Latin America", Paper prepared for a conference on education and social and economic development in Latin America, Santiago, Chile, March 1962.

Dorner, Peter. "The Influence of Land Tenure Institutions on the Economic Development of Agriculture in Less Developed Countries", Paper presented to the international rural institutions subcommittee, Chicago, 1967.

Dovring, Folke. "Land Reform and Productivity: The Mexican Case, Analysis of Census Data", Research paper for the Land Tenure Center, University of Wisconsin, Madison, 1969.

Johnson, Roger G., and Buse, Reuben C. "A Study of Farm Size and Economic Performance in Old Santa Rosa, Rio Grande Do Sul", Research paper for the Land Tenure Center, University of Wisconsin, Madison, 1967.

Lord, Peter P. "The Peasantry as an Emerging Factor in Mexico, Bolivia, and Venezuela", Research paper for the Land Tenure Center, University of Wisconsin, Madison, 1967.

Mirin, Linda and Stinchcombe, Arthur. "The Political Mobilization of Mexican Peasants", Paper presented to the annual meeting of the American Sociological Association, Montreal, September 1964.

Paracho, Sergio Maturana Medina. "The Economics of Development in a Mexican Smallholder Community", Research paper No. 32, Land Tenure Center, University of Wisconsin, Madison, October 1968.

Patch, R.W. "Bolivia: Decision or Debacle", American Universities Field Staff Report, La Paz, 1959.

Patch, Richard W. "Freedom and Development", Research paper for the Land Tenure Center, University of Wisconsin, Madison, 1966.

Sund, Michael. "Land Tenure and Economic Performance of Agricultural Establishments in Northeast Brazil", Research paper for the Land Tenure Center, University of Wisconsin, Madison, 1965.

United Nations Documents

United Nations, Economic Commission for Latin America. Agriculture in Latin America: Problems and Prospects, E/CN.12/686, April 1963.

United Nations, Department of Economic and Social Affairs. Progress in Land Reform: Fourth Report, New York, 1966.

United Nations, Department of Economic and Social Affairs. Social Policy and the Distribution of Income in the Nation, New York, 1969.

United Nations. Compendium of Social Statistics, New York, 1967.

United Nations, Department of Economic and Social Affairs. Report on the World Social System -- 1967, New York, 1969.

United Nations, Economic Commission for Latin America. The Economic Development of Latin America in the Post War Period, New York, 1964.

United Nations, Economic Commission for Latin America. Economic Survey of Latin America -- 1966, New York, 1968.

United Nations, Food and Agriculture Organization. Jacoby, E.H. Evaluation of Agrarian Structures and Agrarian Reform Programs, Rome, 1966.

United Nations, Food and Agriculture Organization. Inter-Relationship Between Agricultural Reform and Agricultural Development, Rome, 1953.

United Nations, Food and Agriculture Organization. Evaluation of Agrarian Structure and Agrarian Reform Programs, Rome, 1968.

United Nations, Food and Agriculture Organization. Production Yearbook, Vol. 22, Rome 1968.

United Nations, Food and Agriculture Organization. Co-Operatives and Land Use, Rome, 1957.

United Nations, Food and Agriculture Organization. World Agricultural Structure, No. 2, Rome, 1961.

United Nations, International Labour Office, The Landless Farmer in Latin America, Geneva, 1957.

United Nations, Food and Agriculture Organization. World Agricultural Structure, Land Tenure, No. 2, Rome, 1961.

APPENDIX

SPEARMAN RANK ORDER CORRELATIONS OF THE GINI INDEX OF
LAND DISTRIBUTION WITH TWENTY ONE INDICATORS OF
ECONOMIC DEVELOPMENT

(1) GINI INDEX OF AGRICULTURAL INCOME -- SELECTED COUNTRIES

<u>Country</u>	<u>Gini Land</u>	<u>Gini Income</u>	<u>Land Rank</u>	<u>Income Rank</u>	<u>D</u>	<u>D²</u>
Brazil	.837	.433	3	4	1	1
Colombia	.849	.432	4	3	1	1
Ecuador	.864	.449	6	6	0	0
El Salvador	.828	.431	2	1.5	.5	.25
Venezuela	.909	.473	7	7	0	0
Argentina	.863	.448	5	5	0	0
Uruguay	.817	.431	1	1.5	.5	.25

$$R_s = .95$$

Source: Gini land index -- Russett, *et al*, *op. cit.*, p. 239.
Gini income index -- derived from ECLA document
E/Cn.12/829, pp. 17-18.

(2) PERCENT CHANGE IN PER CAPITA INDUSTRIAL PRODUCTION
1950-1960

<u>Country</u>	<u>% Change Ind. Prod.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	+48	2	1	1	1
Colombia	+41	3	2	1	1
Ecuador	+17	4	3	1	1
Peru	+54	1	4	3	9
Paraguay	-11	5	5	0	0
Bolivia	-24	6	6	0	0

$$R_s = .66$$

Source: United Nations document E/Cn.12/716/Add. 2, p. 23.

(3) CAPITAL FORMATION AS A PERCENT OF GROSS DOMESTIC
PRODUCT: AVERAGE -- 1945-1960

<u>Country</u>	<u>Cap. Form./ % GDP</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	15.1	3	1	2	4
Colombia	16.3	2	2	0	0
Ecuador	13.5	4	3	1	1
Peru	17.2	1	4	3	9
Bolivia	13.0	5	5	0	0

$R_s = .42$

Source: Colombia, Ecuador, Peru, Bolivia; Charles W. Anderson, Politics and Economic Change in Latin America, D. Van Nostrand Co., Toronto, 1967, p. 324. Mexico; The Economic Development of Latin America in the Post-War Period, United Nations, New York, 1964, p. 114.

(4) PERCENT OF URBAN POPULATION -- 1960

<u>Country</u>	<u>% Urban Pop.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	53.6	1	1	0	0
Colombia	46.1	2	2	0	0
Ecuador	34.7	4	3	1	1
Peru	35.8	3	4	1	1
Paraguay	33.8	5	5	0	0
Bolivia	29.9	6	6	0	0

$R_s = .94$

Source: W. Stanley Rycroft and M.M. Clemmer. A Study of Urbanization in Latin America, Commission on Ecumenical Mission and Relations, New York, 1963, p. 20.

(5) PERCENTAGE CHANGE OF URBAN POPULATION --- 1950-1960

<u>Country</u>	<u>1950 Urban</u>	<u>1960 Urban</u>	<u>% Change</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	45.8	53.6	17	2	1	1	1
Colombia	36.4	46.1	27	5	2	3	9
Ecuador	27.7	34.7	25	4	3	1	1
Peru	28.0	35.8	28	6	4	2	4
Paraguay	27.8	33.8	22	3	5	2	4
Bolivia	25.8	29.9	16	1	6	5	25

$$R_s = -.26$$

Source: Ibid., p. 20.

(6) PERSONS EMPLOYED IN INDUSTRY AS A PERCENT OF URBAN POPULATION -- 1960

<u>Country</u>	<u>% Emp. Ind./ % Urban Pop.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	4.9	1.5	1	.5	.25
Colombia	4.0	3.5	2	1.5	2.25
Ecuador	4.9	1.5	3	1.5	2.25
Peru	4.0	3.5	4	.5	.25
Paraguay	3.5	5	5	0	0
Bolivia	3.0	6	6	0	0

$$R_s = .86$$

Source: Ibid., p. 59.

(7) AVERAGE YEARLY PERCENTAGE CHANGE IN AGRICULTURAL PRODUCTION -- 1946-1959

<u>Country</u>	<u>% Change Ag. Prod.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	3.0	1.5	1	.5	.25
Colombia	2.8	3	2	1	1
Ecuador	3.0	1.5	3	1.5	2.25
Peru	2.3	5	4	1	1
Paraguay	2.4	4	5	1	1
Bolivia	2.0	6	6	0	0

$$R_s = .85$$

Source: Economic Survey of Latin America, United Nations, 1968, pp: 130, 149, 157, 176, 181, 185.

(8) NUMBER OF HECTARES OF ARABLE LAND PER TRACTOR -- 1965

<u>Country</u>	<u>Land/ Tractor</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	383	2	1	1	1
Colombia	215	1	2	1	1
Ecuador	1,224	5	3	2	4
Peru	390	3	4	1	1
Paraguay	973	4	5	1	1
Bolivia	17,365	6	6	0	0

$$R_s = .77$$

Source: Tractor data; Production Yearbook, Food and Agriculture Organization, United Nations, 1968, Rome, p. 476, Arable land data; Statistical Abstract of Latin America, 1964, Latin American Center, University of California, Los Angeles, 1965, p. 4.

(9) AVERAGE YEARLY CONSUMPTION OF NITROGEN FERTILIZER 1959-1967: ONE UNIT = 100 METRIC TONS

<u>Country</u>	<u>Consumpt. Fertil.</u>	<u>Arable Land Hectares</u>	<u>Hect. Land/ Unit Fert.</u>	<u>Rank</u>	<u>Gini Rank</u>	<u>D</u>	<u>D²</u>
Mexico	2210	19,928,000	9,017	2	1	1	1
Colombia	366	5,062,000	13,830	3	2	1	1
Ecuador	78	2,081,000	26,679	4	3	1	1
Peru	700	1,956,000	2,794	1	4	3	9
Paraguay	1	517,000	517,000	5	5	0	0
Bolivia	5	3,091,000	618,200	6	6	0	0

$$R_s = .66$$

Source: Fertilizer data; Production Yearbook, op. cit., p. 460, Arable land data; ibid., p. 4.

(10) AVERAGE YEARLY CONSUMPTION OF PHOSPHATE FERTILIZER 1952-1967: ONE UNIT = 100 METRIC TONS

<u>Country</u>	<u>Consumpt. Fertil.</u>	<u>Arable Land Hectares</u>	<u>Hect. Land/ Unit Fert.</u>	<u>Rank</u>	<u>Gini Rank</u>	<u>D</u>	<u>D²</u>
Mexico	500	19,928,000	39,856	4	1	3	9
Colombia	587	5,062,000	8,623	1	2	1	1
Ecuador	59	2,081,000	35,271	3	3	0	0
Peru	200	1,956,000	2,794	1	4	3	9
Paraguay	10	517,000	517,000	5	5	0	0
Bolivia	4	3,091,000	618,200	6	6	0	0

$$R_s = .60$$

Source: Fertilizer data; ibid., p. 466.

(11) AVERAGE YEARLY CONSUMPTION OF POTASH FERTILIZER 1952-1967: ONE UNIT = 100 METRIC TONS

<u>Country</u>	<u>Consumpt. Fertil.</u>	<u>Arable Land Hectares</u>	<u>Hect. Land/ Unit Fert.</u>	<u>Rank</u>	<u>Gini Rank</u>	<u>D</u>	<u>D²</u>
Mexico	113	19,928,000	175,964	4	1	3	9
Colombia	400	5,062,000	12,647	1	2	1	1
Ecuador	36	2,081,000	57,013	3	3	0	0
Peru	67	1,956,000	29,194	2	4	2	4
Paraguay	1.25	517,000	413,600	5	5	0	0
Bolivia	4.5	3,091,000	686,888	6	6	0	0
$R_s = .60$							

Source: Fertilizer; ibid., p. 471.

(12) PERCENTAGE CHANGE IN POTATO YIELD PER HECTARE
1950-1965 YIELD = 100 KG PER HECTARE

<u>Country</u>	<u>Yield</u> <u>1950</u>	<u>Yield</u> <u>1965</u>	<u>%</u> <u>Change</u>	<u>Rank</u>	<u>Gini</u> <u>Rank</u>	<u>D</u>	<u>D</u> ²
Mexico	45	79	+76	3	1	2	4
Columbia	48	71	+48	4	2	2	4
Ecuador	40	89	+122	1	3	2	4
Peru	57	62	+9	5	4	1	1
Paraguay	47	40	-15	6	5	1	1
Bolivia	17	34	+100	2	6	4	16

$$R_s = .14$$

Source: Production Yearbook, Food and Agriculture Organ-
ization, Rome, 1969, pp. 103-104.

(13) PERCENTAGE CHANGE IN DRY BEAN YIELD PER HECTARE
1950-1965. YIELD = 100 KG PER HECTARE

<u>Country</u>	<u>Yield</u> <u>1950</u>	<u>Yield</u> <u>1965</u>	<u>%</u> <u>Change</u>	<u>Rank</u>	<u>Gini</u> <u>Rank</u>	<u>D</u>	<u>D</u> ²
Mexico	2.6	4.1	+58	1	1	0	0
Colombia	5.3	6.6	+24	2	2	0	0
Ecuador	8.9	5.8	-35	6	3	3	9
Peru	9.1	8.9	-2	3	4	1	1
Paraguay	8.3	7.5	-10	4	5	1	1
Bolivia	8.3	7.1	-14	5	6	1	1

$$R_s = .66$$

Source: Ibid., pp. 153-154.

(14) PERCENTAGE CHANGE IN MAIZE YIELD PER HECTARE
1950-1965. YIELD = 100 KG PER HECTARE

<u>Country</u>	<u>Yield</u> <u>1950</u>	<u>Yield</u> <u>1965</u>	<u>%</u> <u>Change</u>	<u>Rank</u>	<u>Gini</u> <u>Rank</u>	<u>D</u>	<u>D</u> ²
Mexico	7.5	11.2	+49	1	1	0	0
Colombia	10.7	9.1	-15	5	2	3	9
Ecuador	7.2	6.2	-14	4	3	1	1
Peru	14.4	16.4	+14	2	4	2	4
Paraguay	12.1	13.0	+7	3	5	2	4
Bolivia	13.9	11.5	-17	6	6	0	0

$$R_s = .49$$

Source: ibid., pp. 58-59.

(15) PERCENTAGE CHANGE IN WHEAT YIELD PER HECTARE
1950-1965. YIELD = 100 KG PER HECTARE

<u>Country</u>	<u>Yield</u> <u>1950</u>	<u>Yield</u> <u>1965</u>	<u>%</u> <u>Change</u>	<u>Rank</u>	<u>Gini</u> <u>Rank</u>	<u>D</u>	<u>D</u> ²
Mexico	8.8	24.0	+172	1	1	0	0
Colombia	7.1	9.0	+27	5	2	3	9
Ecuador	4.2	8.9	+112	2	3	1	1
Peru	9.2	9.6	+4	6	4	2	4
Paraguay	6.7	10.0	+49	3	5	2	4
Bolivia	6.1	7.8	+28	4	6	2	4

$$R_s = .37$$

Source: Ibid., pp. 38-39.

(16) PERCENTAGE CHANGE IN SUGAR CANE YIELD PER HECTARE
1950-1965. YIELD = 100 KG PER HECTARE

<u>Country</u>	<u>Yield 1950</u>	<u>Yield 1965</u>	<u>% Change</u>	<u>Rank</u>	<u>Gini Rank</u>	<u>D</u>	<u>D²</u>
Mexico	513	595	+16	3	1	2	4
Colombia	552	420	-24	6	2	4	16
Ecuador	617	834	+35	2	3	1	1
Peru	1,331	1,413	+6	5	4	1	1
Paraguay	271	370	+36	1	5	4	16
Bolivia	365	417	+14	4	6	2	4
$R_s = -.20$							

Source: Ibid., pp. 89-90.

(17) PERCENTAGE CHANGE IN RICE YIELD PER HECTARE
1950-1965. YIELD = 100 KG PER HECTARE

<u>Country</u>	<u>Yield 1950</u>	<u>Yield 1965</u>	<u>% Change</u>	<u>Rank</u>	<u>Gini Rank</u>	<u>D</u>	<u>D²</u>
Mexico	17.9	22.6	+26	2	1	1	1
Colombia	19.3	19.6	+1.5	5	2	3	9
Ecuador	17.7	15.2	-14	6	3	3	9
Peru	37.2	38.8	+5	3	4	1	1
Paraguay	18.5	27.0	+46	1	5	4	16
Bolivia	15.2	15.6	+2	4	6	2	4
$R_s = -.14$							

Source: Ibid., p. 75.

(18) PERCENTAGE CHANGE IN TOBACCO YIELD PER HECTARE
1950-1965. YIELD = 100 KG PER HECTARE

<u>Country</u>	<u>Yield</u> <u>1950</u>	<u>Yield</u> <u>1965</u>	<u>%</u> <u>Change</u>	<u>Rank</u>	<u>Gini</u> <u>Rank</u>	<u>D</u>	<u>D</u> ²
Mexico	10	13.2	+32	3	1	2	4
Colombia	10.6	13.8	+36	2	2	0	0
Ecuador	13.7	11.5	-16	6	3	3	9
Peru	10.6	10.4	-2	5	4	1	1
Paraguay	11.2	12.5	+12	4	5	1	1
Bolivia	6.7	12.1	+85	1	6	5	25

$$R_s = -.14$$

Source: Ibid., p. 274

(19) AGRICULTURAL GROSS DOMESTIC PRODUCT PER PERSON ACTIVE
IN AGRICULTURE -- 1950 - 1960

<u>Country</u>	<u>Agric. GDP/</u> <u>Act.</u> <u>Person</u>	<u>Rank</u>	<u>Gini</u> <u>Rank</u>	<u>D</u>	<u>D</u> ²
Mexico	86	2	1	1	1
Colombia	143	1	2	1	1
Ecuador	68	3	3	0	0
Peru	61	4	4	0	0
Bolivia	31	5	5	0	0

$$R_s = .90$$

Source: United Nations Document E/CN.12/686, p. 47.

(20) CONSUMER PRICE INDEXES -- 1960: 1955 = 100

<u>Country</u>	<u>Price Index</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	133.2	2	1	1	1
Colombia	160.4	4	2	2	4
Ecuador	98.8	1	3	2	4
Peru	149.7	3	4	1	1
Paraguay	179.8	5	5	0	0
Bolivia	827.4	6	6	0	0

$$R_s = .72$$

Source: Statistical Abstract of Latin America, op. cit.,
p. 23.

(21) FOOD PRICE INDEX -- 1960: 1955 = 100

<u>Country</u>	<u>Price Index</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	134.3	2	1	1	1
Colombia	165.6	4	2	2	4
Ecuador	93.3	1	3	2	4
Peru	156.0	3	4	1	1
Paraguay	200.7	5	5	0	0
Bolivia	1,101.1	6	6	0	0

$$R_s = .72$$

Source: Ibid., p. 24.

SPEARMAN RANK ORDER CORRELATIONS OF THE GINI INDEX OF
LAND DISTRIBUTION WITH TWENTY THREE INDICATORS OF
POLITICAL DEVELOPMENT

(1) AMERINDIANS AS A PERCENTAGE OF TOTAL POPULATION

<u>Country</u>	<u>% Indians</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	30	2	1	1	1
Colombia	2	1	2	1	1
Ecuador	29	3	3	0	0
Peru	46	4	4	0	0
Bolivia	63	5	5	0	0

$$R_s = .90$$

(2) CENTRAL GOVERNMENT EXPENDITURE ON EDUCATION AS A
PERCENTAGE OF TOTAL EXPENDITURE

<u>Country</u>	<u>% Budget/ Ed.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	24.4	2.5	1	1.5	2.25
Colombia	12.5	6	2	4	16
Ecuador	14.5	5	3	2	4
Peru	24.7	1	4	3	9
Paraguay	19.0	4	5	1	1
Bolivia	24.4	2.5	6	3.5	12.25

$$R_s = -.27$$

Source -- Education Expenditures: Raymond Duncan, op. cit.,
p. 192.

(3) POPULATION PER COMMERCIAL VEHICLE

<u>Country</u>	<u>Pop/ Vehicle</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	96	1	1	0	0
Colombia	135	3	2	1	1
Ecuador	223	4	3	1	1
Peru	105	2	4	2	4
Paraguay	314	5	5	0	0
Bolivia	645	6	6	0	0

$R_s = .83$

Source -- Commercial Vehicles: Statistical Yearbook, 1967,
United Nations, New York, pp. 412-414.

(4) POPULATION PER PRIVATE VEHICLE

<u>Country</u>	<u>Pop/ Vehicle</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	50.5	1	1	0	0
Colombia	122	3	2	1	1
Ecuador	276	5	3	2	4
Peru	66.8	2	4	2	4
Paraguay	396	6	5	1	1
Bolivia	238	4	6	2	4

$R_s = .60$

Source -- Private Vehicles: Statistical Yearbook, 1967,
United Nations, New York, pp. 413-414.

(5) PERCENTAGE OF POPULATION IN METROPOLITAN AREAS OF
100,000 OR MORE

<u>Country</u>	<u>% Pop./ Met. Areas</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	20.3	1	1	0	0
Colombia	18.6	2	2	0	0
Ecuador	14.9	4	3	1	1
Peru	14.1	5	4	1	1
Paraguay	15.4	3	5	2	4
Bolivia	10.6	6	6	0	0

$$R_s = .83$$

Source -- % Population in Metropolitan Areas -- 100,000 &
up: Rycroft and Clemmer, op. cit., p. 51.

(6) PERCENTAGE OF POPULATION HAVING COMPLETED SECONDARY
EDUCATION BUT NO MORE

<u>Country</u>	<u>% Pop./ Sec. Ed.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	4.9	1	1	0	0
Colombia	4.0	2	2	0	0
Ecuador	3.0	4	3	1	1
Paraguay	2.1	5	4	1	1
Bolivia	3.2	3	5	2	4

$$R_s = .70$$

Source -- % Population having Completed Secondary but not
Higher Education: Rycroft and Clemmer, op. cit.,
p. 110.

(7) PERCENTAGE OF POPULATION IN INTERMEDIATE AND SENIOR GRADES OF EMPLOYMENT

<u>Country</u>	<u>% Pop./ Senior Int. Emp.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	16.9	2	1	1	1
Colombia	21.0	1	2	1	1
Ecuador	10.5	4	3	1	1
Paraguay	14.2	3	4	1	1
Bolivia	7.6	5	5	0	0

$R_s = .80$

Source: Raymond Duncan, op. cit., p. 193.

(8) DAILY NEWSPAPER CIRCULATION PER 1,000 POPULATION

<u>Country</u>	<u>Paper Circ./ 1,000</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	83	1	1	0	0
Colombia	56	3.5	2	1.5	2.25
Ecuador	56	3.5	3	.5	.25
Peru	76	2	4	2	4
Paraguay	37	5	5	0	0
Bolivia	34	6	6	0	0

$R_s = .82$

Source: Russett, et. al., op. cit., pp. 108-109.

(9) RADIOS PER 1,000 POPULATION

<u>Country</u>	<u>Radios/ 1,000</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	96.9	2	1	1	1
Colombia	139.5	1	2	1	1
Ecuador	40.6	6	3	3	9
Peru	77.9	3	4	1	1
Paraguay	60.8	5	5	0	0
Bolivia	72.7	4	6	2	4

$R_s = .55$

Source: Russett, et. al., op. cit., pp. 120-121.

(10) NUMBER OF PEOPLE PER NEWSPAPER

<u>Country</u>	<u>People/ Newspaper</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	185,185	2	1	1	1
Colombia	351,545	4	2	2	4
Ecuador	179,875	1	3	2	4
Peru	221,570	3	4	1	1
Paraguay	353,600	5	5	0	0
Bolivia	616,000	6	6	0	0

$R_s = .72$

Source: Statistical Yearbook, 1967, United Nations, New York, pp. 763-764.

(11) DIRECT TAX AS A PERCENTAGE OF TOTAL REVENUES

<u>Country</u>	<u>Direct Tax/ Tot. Rev.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	37.44	2	1	1	1
Colombia	47.23	1	2	1	1
Ecuador	14.43	4	3	1	1
Peru	29.96	3	4	1	1
Bolivia	4.11	5	5	0	0

$$R_s = .80$$

Source: Statistical Yearbook, 1967, United Nations, New York, pp. 632-640.

(12) EXPENDITURE ON DEFENCE AS A PERCENTAGE OF TOTAL EXPENDITURE

<u>Country</u>	<u>Ex. Def./ Total Exp.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	.72	1	1	0	0
Colombia	1.18	2	2	0	0
Ecuador	1.96	3	3	0	0
Peru	3	5	4	1	1
Paraguay	4.5	6	5	1	1
Bolivia	2.1	4	6	2	4

$$R_s = .83$$

Source: Russett, et. al., op. cit., pp. 79-80.

(13) YEARS OF CONSTITUTIONAL GOVERNMENT

<u>Country</u>	<u>Yrs. Const. Gov't</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	24	1	1	0	0
Colombia	20	2	2	0	0
Ecuador	13	3	3	0	0
Peru	9	5	4	1	1
Paraguay	1	6	5	1	1
Bolivia	11	4	6	2	4

$$R_s = .83$$

Source: M.C. Needler. Political Development in Latin America, op. cit., p. 85.

(14) NUMBER OF MILITARY INTERVENTIONS -- 1930 - 1965

<u>Country</u>	<u># Interv.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	0	1	1	0	0
Colombia	1	2	2	0	0
Ecuador	2	4	3	1	1
Peru	2	4	4	0	0
Paraguay	2	4	5	1	1
Bolivia	7	6	6	0	0

$$R_s = .95$$

Source: Lamber, op. cit., pp. 252-254.

(15) DEATHS FROM DOMESTIC GROUP VIOLENCE PER 1 MILLION
POPULATION -- 1950-1962

<u>Country</u>	<u>Deaths/ Mil. Pop.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	4	1	1	0	0
Colombia	316	5	2	3	9
Ecuador	18	2	3	1	1
Peru	26	3	4	1	1
Paraguay	60	4	5	1	1
Bolivia	663	6	6	0	0

$R_s = .66$

Source: Russett, et. al., op. cit., p. 99.

(16) RATIO OF ARMED FORCES TO POPULATION -- 1960-1964

<u>Country</u>	<u>Armed Force./ Pop.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	0.15	1.5	1	.5	.25
Colombia	0.15	1.5	2	.5	.25
Ecuador	0.30	3	3	0	0
Peru	0.41	4	4	0	0
Paraguay	0.50	5	5	0	0

$R_s = .98$

Source: Jose Nun, "The Middle Class Military Coup", in The Politics of Conformity in Latin America, Claudio Veliz (ed.), Oxford University Press, London, 1967, p. 68.

(17) PERCENTAGE OF POPULATION VOTING IN LAST ELECTION

<u>Country</u>	<u>Rank, Pop. Voting/ Elect.</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	1	1	0	0
Colombia	3	2	1	1
Ecuador	4	3	1	1
Peru	2	4	2	4
Paraguay	5.5	5	.5	.25
Bolivia	5.5	6	.5	.25

$$R_s = .81$$

Source: Statistical Abstract of Latin America, 1964,
University of California, Los Angeles, p. 50.

(18) FITZGIBBON AND JOHNSON "DEMOCRATIC" RATING -- 1960

<u>Country</u>	<u>Points</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	613	1	1	0	0
Colombia	602	2	2	0	0
Ecuador	514	4	3	1	1
Peru	518	3	4	1	1
Paraguay	261	6	5	1	1
Bolivia	406	5	6	1	1

$$R_s = .88$$

Source: Fitzgibbon and Johnson, op. cit., p. 518.

(19) PERCENTAGE OF POPULATION HAVING BETTER THAN SECONDARY EDUCATION

<u>Country</u>	<u>% Pop./ High Ed.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	1.8	1	1	0	0
Colombia	1.0	3.5	2	1.5	2.25
Ecuador	1.2	2	3	1	1
Paraguay	0.7	5	4	1	1
Bolivia	1.0	3.5	5	1.5	2.25

$$R_s = .66$$

Source: Rycroft and Clemmer, op. cit., p. 110.

(20) UNIVERSITY STUDENTS AS A PERCENTAGE OF POPULATION -- 1962

<u>Country</u>	<u>U. Student/ Pop.</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	260	1	1	0	0
Colombia	465	4	2	2	4
Ecuador	392	3	3	0	0
Peru	355	2	4	2	4
Bolivia	640	5	5	0	0

$$R_s = .60$$

Source: J.A. Lauwerys, "The Universities of Latin America", in Latin America, Claudio Veliz (ed.), op. cit., p. 721.

(21) URBAN MIDDLE CLASS AS A PERCENTAGE OF TOTAL URBAN
POPULATION -- 1950

<u>Country</u>	<u>% Middle Class</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	37	1	1	0	0
Colombia	28	2	2	0	0
Ecuador	21	5	3	2	4
Paraguay	27	3	4	1	1
Bolivia	26	4	5	1	1

$R_s = .70$

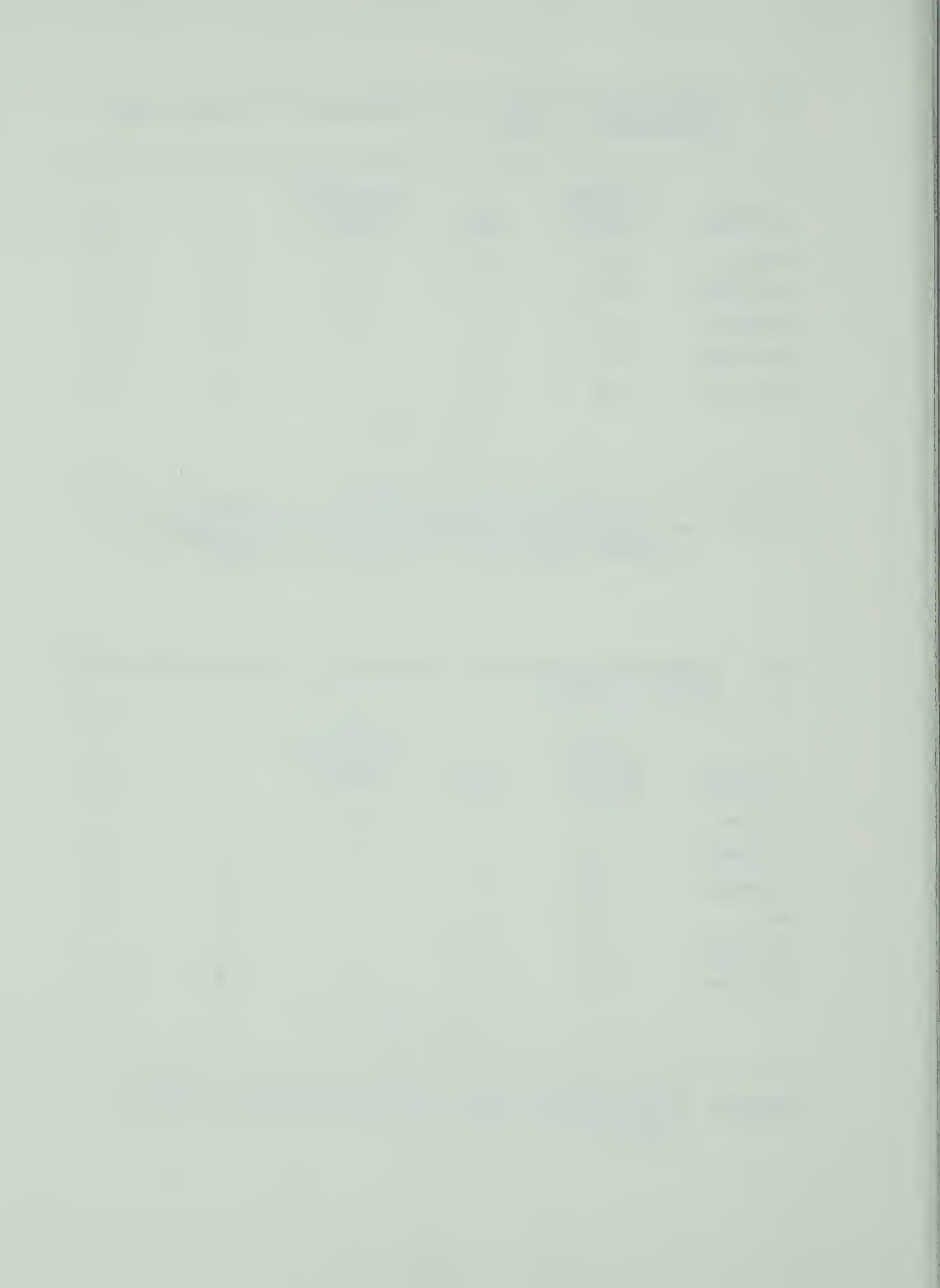
Source: G. Germani, Quoted in Torcuato S. DiTella, "The Working Class in Politics", in Latin America, Claudio Veliz (ed.), op. cit., p. 388.

(22) ORGANIZED LABOUR AS A PERCENTAGE OF THE TOTAL LABOUR
FORCE -- 1960

<u>Country</u>	<u>% Union Member</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	6.1	1	1	0	0
Colombia	2.2	4	2	2	4
Ecuador	2.0	5	3	2	4
Peru	5.1	3	4	1	1
Paraguay	1.2	6	5	1	1
Bolivia	5.4	2	6	4	16

$R_s = .26$

Source: M.C. Needler, Political Development in Latin America, op. cit., p. 96.



(23) PERCENTAGE LITERATE OF POPULATION AGED 15 AND OVER
1950

<u>Country</u>	<u>% Literate</u>	<u>Rank</u>	<u>Gini/Land Rank</u>	<u>D</u>	<u>D²</u>
Mexico	46	4	1	3	9
Colombia	56	2.5	2	.5	.25
Ecuador	56	2.5	3	.5	.25
Peru	43	5	4	1	1
Paraguay	64	1	5	4	16
Bolivia	20	6	6	0	0

$$R_s = .25$$

Source: Russett, et. al., op. cit., p. 223.

CORRELATION MATRIX: SPEARMAN RANK CORRELATION
COEFFICIENTS FOR TWENTY THREE MEASURES OF
POLITICAL DEVELOPMENT: CIRCA 1955-1965

- 1) INDIANS AS A PERCENT OF TOTAL POPULATION
- 2) CENTRAL GOV'T EXPENDITURE ON EDUCATION AS % OF TOTAL EXPENDITURE
- 3) POPULATION PER COMMERCIAL VEHICLE
- 4) POPULATION PER PRIVATE VEHICLE
- 5) % POPULATION IN METROPOLITAN AREAS OF 100,000 OR MORE
- 6) % POPULATION HAVING COMPLETED SECONDARY EDUCATION BUT NO MORE
- 7) % POPULATION IN INTERMEDIATE & SENIOR GRADES OF EMPLOYMENT
- 8) DAILY NEWSPAPER CIRCULATION PER 1,000 POPULATION
- 9) RADIOS PER 1,000 POPULATION
- 10) NUMBER OF PEOPLE PER NEWSPAPER
- 11) DIRECT TAX AS A % OF TOTAL REVENUE
- 12) EXPENDITURE ON DEFENCE AS A % OF TOTAL EXPENDITURE
- 13) YEARS OF CONSTITUTIONAL GOVERNMENT
- 14) NUMBER OF MILITARY INTERVENTIONS
- 15) DEATHS FROM DOMESTIC GROUP VIOLENCE
- 16) RATIO OF ARMED FORCES TO POPULATION
- 17) % OF POPULATION VOTING IN THE LAST ELECTION
- 18) FITZGIBBON AND JOHNSON DEMOCRATIC RATING
- 19) % OF POPULATION HAVING BETTER THAN SECONDARY EDUCATION
- 20) UNIVERSITY STUDENTS AS A % OF POPULATION
- 21) URBAN MIDDLE CLASS AS A % OF TOTAL URBAN POPULATION
- 22) ORGANIZED LABOUR AS A % OF TOTAL LABOUR FORCE
- 23) % OF POPULATION THAT IS LITERATE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1)		-.62	.50	.30	*.90	.60	*.90	.43	.70	.30	-.20	.80	.80	.77	.40	*.98	.50	.80	.63	.30	.60	-.40	.83
2)			.25	.48	-.39	.23	-.42	.29	.05	-.07	.08	-.27	-.32	-.11	.19	-.32	.30	.05	.28	.43	.19	.59	-.65
3)				*.83	.60	.70	.80	*.98	.60	.66	-.10	.54	.54	*.83	.72	.79	*.98	*.89	.68	*.90	.70	.43	-.04
4)					.31*1.00	.50	.79	.78	.32	.60	.60	.60	.60	.60	.37	.79	*.90	*.89	.68	.70	.70	*.83	-.58
5)						.60	*.90	.56	.49	.37*1.00	.60	.60	*.95	.49	.68	.53	.60	.38	.60	*.90	.27	*.83	
6)							.50	.63	.80	.55	.00	*.90	*.90	.68	.55	.68	.83	*.90	.68	.10	.70	*.90	.18
7)								.68	.70	.30	*.90	.60	.60	.88	.30	.88	.73	.60	.13	.40	.80	.10	.38
8)									.48	.76	.58	.53	.53	.79	*.83	.58	*.97	*.85	.78	*.98	.58	.43	-.03
9)										-.09	*.95	.55	.55	.66	-.09	.68	.65	.77	.13	.20	.80	.55	-.21
10)											.70	.49	.49	.55	*.89	.43	.65	.55	.73	.70	.00	-.02	.19
11)												.60	.60	.88	.30	.88	.70	.80	.13	.40	.80	.00	.58
12)												*1.00	.72	.38	*.98	.62	*.83	*.90	.30	.60	.55	.00	
13)													.73	.38	*.98	.62	*.83	*.83	.60	.60	.43	.00	
14)													.60	*.88	.79	*.83	.55	.82	.82	.26	.39		
15)													.23	.68	.49	.69	*.90	.30	.15	.19			
16)													.63	.88	.58	.48	.68	.63	-.22				
17)														*.93	.81	*.90	.68	.56	-.17				
18)															.83	.70	.60	.60	-.18				
19)																.38	.23	.68	-.42				
20)																	.50	.30	.18				
21)																		.50	-.02				
22)																					-.73		
23)																							

* Denotes significant coefficients



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